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Letters

Fluoridation—*Con* and *Pro*

Sirs:

I have observed the article by E. Roy Hammarlund, "Why All the Delay on Fluoridation?" in the January A.PH.A. JOURNAL. I am going to cast off the mantle of a pharmacist and take the position of a public relations counsel and a good citizen—and answer this rather forcibly.

As the title of this article was a question, here are just a few of the answers:

- The endorsements and expert testimonies regarding fluoridation are more than 95% "me too" endorsements from physicians and dentists who know nothing about it.
- The tremendous push of the Dental Association to "put this over at any cost" cannot help but conceal an ulterior motive.
- Fluoridation is probably only a start. They will want to treat the water one way for cancer and another way for gout; pretty soon we won't have any water at all.
- A large segment of our people are honestly afraid of the effects on their health. Various surveys have shown that 20% to 60% of the people fear its effects.

The fact that it is beaten practically in almost every case where it is put on the ballot proves this beyond a doubt. The position of the dental group—"cram this down their ignorant throats whether they want it or not"—is not a very nice return by the dentists for the high position in which they have been placed.

Actually there is little or nothing in favor of fluoridation. My suggestion is that pharmacists should keep hands off this very delicate situation, which has split families and cities—and offers little possibility of good.

Tecumseh, Mich. A. C. HAMAKER

[*Editor's Note:* According to latest records (April 1955) from the Department of Health, Education, and Welfare, fluoridation was defeated on referendum in 117 municipalities having a total population of somewhat over 3 million and located in 31 states; it was authorized by referendum in 99 municipalities with a total population of almost $2^1/_2$ million, located in 24 states.]

Sirs:

I respect Mr. Hamaker's right to differ with me over the fluoridation issue, but I would also like to present the following in answer to his letter:

- Physicians and dentists compose only a small part of all those who have thoroughly investigated the aspects of fluoridation and given it their endorsement. I refer Mr. Hamaker to the list of references in the original article.
- Fluoridation is not claimed to be a treatment or a cure for any disease or condition—it is merely prevention. Most people accept the fact that the fillings in one's teeth are designed to prevent decayed areas from becoming larger. Fluoridation is simply designed to prevent much of the same decay from starting *in the first place.*
- The fact that fluoridation does not pass in all of the municipalities where it is put to a public vote shows that there is certainly a large segment of people honestly afraid of its effects. These people need to know more about fluoridation, and the entire reason for writing this article was to help make many of the facts known to the public through the aid of local pharmacists.
- In conclusion, I do not believe that it is the nature of the pharmaceutical profession or of the American way of life to run away from a controversy.

Pullman, Wash. E. ROY HAMMARLUND

Sirs:

I was very pleased to see the article on fluoridation in the January issue. Only through constant education can the effects of the half-truths, insinuations and downright lies told by the anti-fluoridationists be overcome. I urge you to print more articles on fluoridation, especially the results as they are made known.

Please congratulate the author of the fluoridation article for me.

Greenwich, Conn. ROBERT J. MUNCH

Sirs:

An error occurs in the last sentence of the first paragraph, second column, page 23, of my article in the January 1955 issue of THIS JOURNAL. The sentence should read: "Indeed, it would be impossible to absorb an acute lethal dose, 4 Gm. of sodium fluoride, unless a person drank about 500 gallons of the fluoridated water at one sitting."

Pullman, Wash. E. ROY HAMMARLUND

℞ information service

Members of the American Pharmaceutical Association are invited to submit their professional problems to The Journal, 2215 Constitution Ave., N. W., Washington 7, D. C. Inquiries should include all pertinent details.

Dermatologic Lotion

How should the following mixture be compounded?—W. N. J., Massachusetts.

ZnO	20
Glycerin	4
Talc	20
Resorcinol	4
Boric acid	4
Kaolin	20
Witch hazel	60
Distilled water, q.s.	180

The following procedure yielded a satisfactory product: Dissolve the boric acid in 40 cc. of hot water, remove the solution from the source of heat, add the witch hazel, and then the resorcinol. Mix the zinc oxide, talc and kaolin in a mortar, then add the glycerin and enough water to make a smooth paste. Add the aqueous solution to the paste with mixing, then add enough water to make the required volume and mix. Dispense with a "shake well" label.

An alternate procedure would use a mechanical mixer (such as a milk shake mixer) for mixing the prepared aqueous solution, the powders, the glycerin, and the water.

Sunscreen Agents

Please give us information on sunscreening agents, particularly PABA and sodium PABA.—W. F. B., Canada.

p-Aminobenzoic acid (PABA) and its sodium salt are both used in sunscreen products. L. Stambovsky, *Drug and Cosmetic Ind.*, **76,** 44, 128(1955) notes that of 27 actively promoted suntan products, 19 employ derivatives of aminobenzoic acid or salicylic acid; four do not reveal the active agent; one contains digalloyl trioleate (tri-oleic acid ester of tannic acid); and two contain ethylhexanediol. A tabulation of relative sunscreening efficiency by W. D. Kumler, *J.A.Ph.A., Sci. Ed.*, **41,** 492(1952), indicates *p*-aminobenzoic acid and its esters are among the most effective agents tested. The sodium salt of PABA is not listed. The sodium salt of *p*-aminosalicylic acid was found to be more effective than the acid, but this would not necessarily hold for PABA and its salt. A report by C. D. Bell and W. F. Mazzone, *U.S. Armed Forces Med. J.*, **3,** 1225(1952), indicated that sodium PABA gave more protection against sunburn than did homomethyl salicylate, menthyl anthranilate, and tannic acid and salol. A report in *Ind. and Eng. Chem.*, **46,** 15A(July, 1954), states that sunburn preparations made for the Army may contain glyceryl mono-*p*-aminobenzoate, 2-ethylhexyl salicylate, homomenthyl salicylate, or dipropylene glycol salicylate, in a hydrocarbon vehicle.

Colored Sunscreen Ointment

How can the following sunscreen product be colored for skins classed as "blond," "brown" and "dark?"—J. H. R. B., Curaçao, N.A.

PABA	10%
Titanium dioxide	5–10%

In a water-washable base (Hydrosorb or Glider Cream).

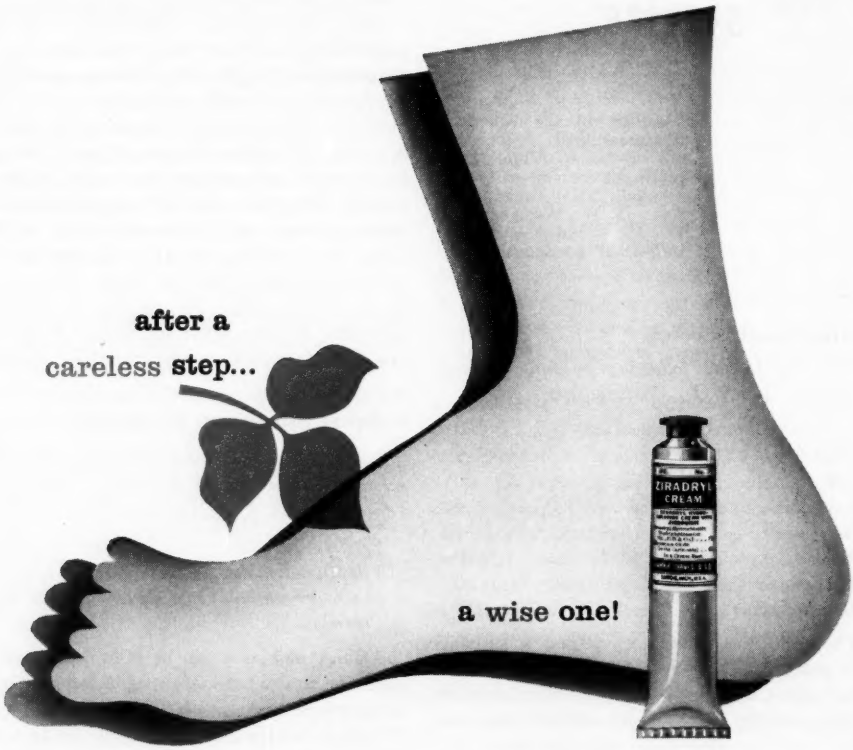
A faint pink tint can be obtained by adding calamine to the product or replacing part of the titanium dioxide with calamine. For the "brown" classification you might use, in a similar manner, neocalamine, obtainable from Mallinckrodt Chemical Works, St. Louis, Mo.

For the "dark" classification you might use one of the commercially available ochres. If you do not wish to disturb the titanium dioxide content in the preparation to which you have become accustomed, you might adjust your colors by adding various shades of iron oxides to the titanium dioxide. The new N.F. X will contain tables indicating how coloring agents (dyes) can be used for such purposes.

Mantomide—Source

Where can the drug Mantomide be obtained?—S. E., Maryland.

Mantomide, N-(2,4-dichlorobenzyl)-N-(2-hydroxyethyl) dichloroacetamide, is a product of the Sterling-Winthrop Research Institute, Rensselaer, N.Y. Experimental clinical trials have shown it to be effective in the treatment of intestinal amebiasis, especially when used in combination with erythromycin. It is not available commercially at present.



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MEDICAMENTA

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Progress in Medicine

Mosquito Repellents

Effective mosquito repellents have been synthesized and tested by investigators of the U.S. Dept. of Agriculture. Most effective is the compound N,N-diethyl-*m*-toluamide (20218) which prevented bites by yellow-fever mosquitos for 4.5 hours compared with 1.5 hours for a standard military repellent. Against glades mosquitos 20218 gave nearly 2 hours' protection; a standard gave 1.5 hours. Although apparently nontoxic when used on the skin of the arm, further testing is necessary. The new compounds are not available in commercial form.

Zirconium Oxide in Rhus Dermatitis

Laboratory studies reported by Drs. G. A. Cronk and D. E. Naumann [*Antibiotics & Chemotherapy*, **5,** 64(Feb., 1955)] indicate that lotions containing hydrous zirconium oxide, 4%, alone or in combination with phenyltoloxamine dihydrogen citrate, 1%, when applied with moderate rubbing up to eight hours after application of poison ivy extract (1:10 acetone solution), will prevent dermatitis from developing. Lotions containing either or both ingredients appeared to have an antipruritic effect. If a well-developed dermatitis from the *Rhus toxicodendron* extract was allowed to form, the lotions did not materially affect the progress of the pathology. The lotion base contained glyceryl monostearate, polyoxyethylene propylene glycol monostearate, polyoxyethylene stearate, F.D.C. red No. 4, F.D.C. yellow No. 5, and distilled water.

Mysuran Chloride in Myasthenia Gravis

Beneficial effects in 75 patients with the muscle weakness disease, myasthenia gravis, are reported with WIN 8077 [Mysuran chloride, N,N′-bis(2-diethylaminoethyl) oxamide bis-2-chlorobenzyl chloride], which has a strong anticholinesterase activity. Fifty-nine of the 75 patients are continuing with this drug, while 17 prefer some neostigmine or Mestinon with the Mysuran. The dosage must be adjusted carefully for each patient because some get along with 2-4 mg. per dose, while others require 50-75 mg. per dose. Mysuran was administered as a syrup (particularly when small doses were given), as tablets and parenterally. The parenteral use suggests a $^1/_{30}$ to 1 ratio to the oral dose, with a prolonged effect of nearly three hours, but this route is not recommended until further experience is obtained. Early indications of oral overdosage, resulting in gastrointestinal disturbances, are minimal and make greater care and supervision necessary. Mysuran is said to be somewhat more powerful and about twice as long acting as neostigmine or Mestinon with less side-effects on the gastrointestinal tract.

[Schwab, R. S., Marshall, C. K., and Timberlake, W., *J. Am. Med. Assoc.*, **158,** 625(June 25, 1955).]

Sulfonamides in Meningitis

Sulfonamides are valuable in the treatment of meningitis, according to Dr. S. Ross, *Antibiotics & Chemotherapy*, **5,** 33(April, 1955), because they offer the following advantages: wide antibacterial spectral range; low cost; easy administration, intravenously and orally; ready crossing of blood-brain barrier. He reports excellent results on meningococcal meningitis with sulfadiazine alone or in combination with penicillin if necessary. He also suggests the use of sulfadiazine in combination with antibiotics for pneumococcal, streptococcal, and influenzal meningitis.

Bonadoxin in Morning Sickness

The combination of the antihistamine meclizine (Bonamine) 25 mg. and the vitamin pyridoxine HCl 50 mg. in each Bonadoxin tablet, administered one tablet every twelve hours, eliminated nausea and vomiting associated with morning sickness of pregnancy in 30 of 100 women. Vomiting was eliminated in another 58 patients, and 12 failed to respond, according to the report by Drs. A. Weinberg and W. E. F. Werner, *Am. Pract. and Digest of Treatment*, **6,** 580(1955)

Faster Diagnosis of Polio

Antibody response tests utilizing a tissue culture method enabled recognition and typing of poliomyelitis virus within seven days in 60% of the patients from whom the virus was isolated. By two weeks after test inoculations of the specimens positive results were available in 88%. In 49 patients with paralytic polio a polio virus was isolated in 90%. Of 41 patients with meningitis and nonparalytic polio, 13 patients harbored a polio virus, and three of six patients with encephalitis had a polio virus.

Diagnosis of nonparalytic polio previously depended much on symptoms and epidemic factor

studies. The earlier methods of isolation and typing of polio virus utilized live monkeys and required weeks, and were therefore of little practical help to clinicians. The tissue culture method gives the results in days, and the test can indicate the presence of virus before the disease symptoms are noted in suspected cases.

[Godenne, M. O., and Riordan, J. T., *J. Am. Med. Assoc.*, **158,** 707(July 2, 1955).]

Mephenesin in Dental Practice

Relaxation of cerebral palsy patients by administration of mephenesin permits 90% of them to cooperate with less apprehension in obtaining normal dental care, reports Dr. M. M. Album of Philadelphia. The effect of the drug lasts about 30–40 minutes, and side reactions rarely occur.

[Album, M. M., *J. Am. Dental Assoc.*, **51,** 51(July, 1955).]

Methantheline Bromide in Unstable Colon

Although methantheline (Banthine) bromide, an autonomic blocking agent, is useful in the medical management of duodenal ulcer, it does not appear to be more efficacious in the treatment of "irritable colon" conditions than is standard therapy or use of a placebo. These observations are based on a controlled study of 59 patients. Methantheline did have a beneficial clinical effect in acute episodes of diarrhea of a psychogenic nature occuring in the course of the chronic colon disorder.

[Lichstein, J., Mayer, J. DeC., and Hauch, E. W., *J. Am. Med. Assoc.*, **158,** 634(June 25, 1955).]

Dapsone in Dermatitis Herpetiformis

Good control resulted in 23 of 28 cases of dermatitis herpetiformis and fair control in the other 5 cases, all of which were treated with 4,4′-diaminodiphenylsulfone (dapsone) in single daily doses of 50–150 mg. orally. Some anemia developed early in the treatment in several cases, but there was no evidence of either jaundice or gross liver dysfunction. Minor abnormalities were indicated by liver-function tests in 6 patients, and 1 patient developed sulfhemoglobinemia. There appeared to be no selective concentration of dapsone in the skin. The investigators (1) note that though dapsone now appears to be the drug of choice in dermatitis herpetiformis, sulfapyridine is of equal value in many cases and may be more effective in some.

A report (2) on a second group of 28 patients treated orally with 200 mg. of dapsone daily for one week, 100 mg. for the next two weeks, then with a minimum maintenance dosage, shows excellent control in 24 cases. Neither dapsone nor sulfapyridine cures the disease, and withdrawal of therapy usually leads to relapse. Dapsone did not produce the severe nausea and depression often observed during treatment with sulfapyridine.

[(1) Morgan, J. K., *et al.*, *Lancet*, **268,** 1197 (1955). (2) Alexander, J. O'D., *ibid.*, **268,** 1201(1955).]

Nitrofurazone in Swine Coccidiosis

A 0.44 per cent concentration of nitrofurazone incorporated in feed administered for a period of 7 days to swine with coccidiosis due to *Eimeria debeliecki* enabled recovery within the week with no symptoms of intolerance, toxicity or other side effects, immediate or delayed. The report by J. Deom and J. Mortelmans appeared in *Annales de médecine vétérinaire* (Brussels), **98,** 82(March, 1954).

Chlorpromazine in Acute Alcoholic States

Effective use of chlorpromazine (Thorazine) in the management of 164 alcoholic patients (141 males, 23 females) is reported by four Washington, D.C., physicians. The usual dosage was 100 mg. of chlorpromazine intramuscularly on admission, followed by 50 mg. three times daily until symptoms subsided. The patients received increased amounts of fluids, usually water and fruit juice taken orally.

The drug produces immediate control of motor excitement and of nausea and vomiting, permits a restful, relaxed sleep, and contributes to the relief of tension and anxiety. No addiction to the drug has been noted. During initial therapy orthostatic hypotension of moderate degree is common and occasionally it is severe. The blood pressure should be closely followed and the patient should be kept in a recumbent postion.

[Schultz, J. D., *et al.*, *Quart. J. Studies Alc.*, **16,** 245(June, 1955).]

Chlorpromazine–Rauwolfia Combination in Essential Hypertension

In a study of 75 patients with essential hypertension (high blood pressure without known cause), treatment with combined chlorpromazine

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OCTOBER 2–8, 1955

(Thorazine), 15 mg., and *Rauwolfia serpentina* (whole root), 50 mg., in one capsule given orally three times daily showed significant lowering of blood pressure in 85% of the patients with mild hypertension, in 70% with moderate, and in 60% with severe hypertension. Of the 75 patients, 95% felt better. Later results with 350 patients with essential hypertension were better with a dosage schedule of 25 mg. of chlorpromazine combined with 50 mg. of *R. serpentina* given orally three to four times daily. After 18 months of therapy no jaundice or other side-effects were observed in the 350 patients.

[Eiber, H. B., *J. Am. Med. Assoc.*, **158,** 730 (July 2, 1955).]

Radioactive Plastic Needles and Sutures

Radioactive filaments prepared by extrusion of a soft mixture of irradiated finely powdered yttrium oxide with methylcellulose and propylene glycol permit irradiation by needle implantation or by suture in localized areas or tumors, according to a report by H. C. Dudley and T. G. Mitchell. The plastic material is dispersed in less than two days and the yttrium delivers a radiation dose of 100,000 to 170,000 roentgen units to each Gm. of tissue in the area. In other trials reported by Dudley and J. Greenberg, radioactive yttrium combined with N′-hydroxyethylenediamine triacetic acid was found to accumulate in growing bone tissue and avoided the marrow. This indicated a possible use for the treatment of bone cancer. The reports were presented before the Division of Biological Chemistry, Am. Chem. Soc., at Cincinnati, March 30, 1955.

Cancer Formation in Rat Liver

Based upon detectable alteration of lipid metabolism when normal liver cells become cancerous, Dr. Grace Medes reported to the March 30 A.C.S. meeting at Cincinnati that liver cancer does not begin to form in the rat until about six or eight months after feeding of a carcinogen (dimethylaminoazobenzene) has begun. The process might take longer in humans. Although the visible appearance of the rat liver tissue might be altered after four to six months, the sudden appearance of the tumor might not occur for another six months.

Aureomycin in Pyorrhea

Favorable effects of orally ingested chlortetracycline on pyorrhea are reported in a communication by N. S. Sahasrabudhe in *The Antiseptic*, **51,** 1323(1954.)

PRINCIPAL TYPES OF FOOD-BORNE INFECTIONS AND INTOXICATIONS

Causative Organism	Foods Commonly Involved	Type of Poisoning	Onset of Nausea, Vomiting, Diarrhea After Ingestion	Other Symptoms
Staphylococcus aureus	Salads Cream puffs Processed meats and fish	Toxin	2–4 hrs.	Cramps Occasionally headache and fever
Salmonella	Egg products Dairy products	Infection	6–72 hrs.	Chills, Fever Muscle aches, Cramps Headache
Clostridium botulinum	Canned, low acid foods	Toxin	12–36 hrs. (often absent)	Difficulty swallowing Muscular weakness Dizziness Difficult speech Photophobia Loss of reflexes
Trichinella spiralis	Undercooked pork	Infection	5–10 days (often absent)	Edema, Fever Eosinophilia Muscular pains Spastic paralysis

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President Eisenhower Salutes The Pharmacists of America

On the front cover of this issue of the JOURNAL President Eisenhower salutes the profession of pharmacy on the observance of National Pharmacy Week and calls particular attention to the theme "Your Pharmacist Works for Better Community Health."

Display Contest

Every pharmacy in the United States has been advised by direct mail, through state pharmaceutical association bulletins and national, state and local publications, on the details and rules of the National Pharmacy Week display contest.

The cooperation of each pharmacist in installing a National Pharmacy Week display, October 2–8, is solicited. Window display contest awards will be presented in four categories of competition—retail pharmacy, colleges of pharmacy, public exhibits, and hospital and clinic exhibits.

Pharmacists need not be reminded of the potential impact on the public if all or a majority of the nation's pharmacists take an active part in this program. This is an opportunity to offset some of the unfavorable publicity resulting from newspaper and magazine articles dealing with certain illegal commercial practices which have at times received undue emphasis through sensational headlines. The community health services of most pharmacists are greatly appreciated by the public but mass emphasis on them at least once each year in the form of public displays is essential in order to focus attention on them.

Special Kit Available

Participation in National Pharmacy Week will not be limited to the installation of displays. To assist pharmacists in taking an active part in various phases of the observance, a variety of publicity aids covering all types of media may be ordered from the AMERICAN PHARMACEUTICAL ASSOCIATION at a nominal charge. These include material of tested interest coupled with an up-to-date approach covering public addresses, radio and television scripts, newspaper editorials and advertising mats. Individual items may be ordered or a collection of 16 items in kit form may be obtained for $1.00. Write for a participation order form in the event that only certain selected items are desired, or use the form on page 415 of the July issue of THIS JOURNAL.

Things To Do Now

In order to make National Pharmacy Week a successful event, it is suggested that immediate action be taken on the following:

1. Plan to install a National Pharmacy Week window display and an exhibit in a public building in your community.
2. Request your Governor and Mayor to issue a proclamation designating the week of October 2–8 as National Pharmacy Week.
3. Contact the secretaries and program chairmen of service clubs and other organizations *now* requesting that a pharmacist be given a place on their programs during the week of October 2.
4. Arrange for program time *now* with station managers and program directors of local radio and television stations.
5. See local newspaper editors *now* regarding editorials and special feature articles.
6. Place a National Pharmacy Week announcement or paid advertisement in your local newspapers.
7. Make use of President Eisenhower's telegraphic message reproduced on the front cover of THIS JOURNAL.

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Hospital Pharmacy

Education and Internships

During the past few decades increased attention has been given to providing adequate pharmaceutical services in the nation's hospitals. Along with this has come the need for educating and training pharmacists to provide the services needed in this specialty. Thus, educators and practitioners are giving increased attention to providing specialized training programs in hospital pharmacy. This activity covers a wide range of possibilities including actual courses in schools of pharmacy, graduate work leading to advanced degrees, internship programs, and seminars and institutes on hospital pharmacy.

In line with the current demand for information and the growing interest in hospital pharmacy, the May–June (1955) issue of *The Bulletin of the American Society of Hospital Pharmacists* is devoted to education and internships.

Among the papers included in this special issue are several which were presented at the 1955 annual meeting of the American Society of Hospital Pharmacists. Summaries of the papers on education and internships appear below.

Educational Goals

Trends in education and training in hospital pharmacy highlighted the discussions at the annual meeting. Dean Glenn L. Jenkins of Purdue University, speaking on "Educational Goals for Hospital Pharmacy," reviewed first the objectives of general education in pharmacy school and then pointed out the more specific objectives of the professional education. He discussed the pattern for graduate work in hospital pharmacy outlining points which should be emphasized. He further suggested "that the Society endorse and promote, at least in a limited number of schools, the education of superior men and women for work in hospital pharmacy and an educational program that will lead to professional competence and the capacity to serve as consultants to physicians and to cooperate in research with members of the hospital staff."

This was followed by a discussion of internship programs by Dr. Halsey Hunt, assistant surgeon general of the U.S. Public Health Service. He related the development of the pharmacy internship programs to those in other specialties pointing out the need and value of this type of training, the qualifications and prerequisites established for hospitals where internships are offered, and what the internship should consist of.

Evaluation of Internships

Evaluation of the internship programs in existence was discussed by Dr. Don E. Francke in the absence of Dr. Robert P. Fischelis, who was scheduled to outline the plan for evaluating internships as set up by the Policy Committee of the Division of Hospital Pharmacy. In his discussion, the general philosophy of any type of approval or accrediting body was emphasized, pointing out that a regimented program is not the best type of training for future hospital pharmacists. Good teaching, adequate equipment and the facilities for exericising proper initiative were outlined as the most important factors for providing a satisfactory training program in hospital pharmacy.

Details regarding the work of the Division in evaluating the internships were outlined and copies of the tentative questionnaire were made available to those interested. It was emphasized that the program was not one intended to eliminate certain internship programs, but rather one of developing these programs along logical and competent lines.

Further interest in education and training for hospital pharmacists was brought out in a panel discussion under the title "Evaluation of Training Programs (Internships) and Prerequisites for Positions in Hospital Pharmacy." Representation on the panel included a hospital administrator, Dr. C. C. Hillman of the Jackson Memorial Hospital in Miami; a hospital pharmacist in charge of a two-year internship program (combined with graduate work), Dr. W. Arthur Purdum of The Johns Hopkins Hospital in Baltimore, Md.; and a representative of the one-year internship program, Mrs. Evlyn Gray Scott of St. Luke's Hospital in Cleveland, Ohio. Allen V. R. Beck, chief pharmacist at Indiana University Medical Center in Indianapolis, served as moderator. Members of the panel brought out the need for providing internships of both types in order to provide an adequate number of *trained* hospital pharmacists. It was emphasized that such a period is necessary in order for the future hospital pharmacists to familiarize themselves with what is *good* hospital pharmacy practice. The administrator, Dr. Hillman, pointed out some of the problems in providing educational programs in hospitals and the advantages in seeking hospital pharmacists who have this additional specialized training.

A number of other papers covering the technical aspects of hospital pharmacy practice were presented by pharmacists and educators during the two-day meeting.

YOUR PHARMACIST WORKS FOR
BETTER COMMUNITY HEALTH
NATIONAL PHARMACY WEEK
OCTOBER 2–8, 1955

FDA Criminal Actions

Seizure cases involving drugs and medical devices terminated during June totaled 16. Two shipments of coal-tar colors were seized because they had not been certified for food use. One of these carried the label "U.S. Certified Food Colors." Some of the colors contained mold and others less than the declared amount of dye.

In two cases involving C-Tone, a vitamin preparation, the Government charged it was low in stated vitamin content and misbranded in its therapeutic claims for treating high blood pressure, hardening of the arteries and failing memory, among other afflictions. The producer, Byrne Products, New York, pleaded guilty. But Balanced Foods, Inc., a New York distributor, was acquitted when it successfully established that it had acted in good faith and had relied on a guarantee from Byrne that the product complied with the Federal Food, Drug, and Cosmetic Act.

Over-the-Counter Sales

Warren, Ark.—Selling and refilling prescriptions for barbiturates, penicillin, and thyroid without physicians' authorizations. Each defendant placed on probation for 1 year.

Warren, Ark.—Selling and refilling prescriptions for amphetamine and sulfonamides without physicians' authorizations. Placed on probation for 1 year.

Jacksonville, Fla.—Selling barbiturates, ergo-apiol with savin, and thyroid without physicians' prescriptions. Fined $150.

Jacksonville, Fla.—Refilling prescriptions for barbiturates without physicians' authorizations. Found guilty in May, but sentencing was deferred pending probation officer's report. On June 3, owner fined $250; employee fined $100.

Marietta, Ga.—Selling and refilling precriptions for barbiturates, hormones, and thyroid without physicians' authorizations. Each defendant fined $200 and placed on probation for 2 years.

Bradley Beach, N.J.—Selling and refilling prescriptions for amphetamine, barbiturates, and Veriloid without physicians' authorizations. Firm and individual fined $250 each; individual placed on probation for 2 years.

Carolina Beach, N.C.—Refilling precriptions for amphetamine and barbiturates without physicians' authorizations. Fined $100. (Terminated in May but not previously reported.)

Wilmington, N.C.—Refilling precriptions for amphetamine and barbiturates without physicians' authorizations. Owner fined $100; one employee fined $10; second employee fined $30. (Terminated in May but not previously reported.)

Latrobe, Pa.—Selling and refilling prescriptions for barbiturates and sulfonamides without physicians' authorizations. Placed on probation for 6 months.

Latrobe, Pa.—Selling and refilling prescriptions for Banthine and barbiturates without physicians' authorizations. Placed on probation for 6 months.

Latrobe, Pa.—Selling hormones without physicians' prescriptions. Fined $300 and court costs of $37.

Philadelphia, Pa.—Selling sulfonamides, thyroid, and Gynergen without physicians' prescriptions. Owner fined $550 on May 11 (not previously reported), given a 1-year suspended jail sentence and placed on probation for 3 years; employee fined $50.

Philadelphia, Pa.—Selling ergotin and aloe pills and thyroid tablets without physicians' prescriptions. Fined $100.

Bells, Tenn.—Selling amphetamines, sulfonamides, penicillin and thyroid without physicians' prescriptions. Owner fined $1,500; employee fined $500.

Williamson, W.Va.—Refilling prescriptions for amphetamine, barbiturates, and sulfonamides without physicians' authorizations. Firm fined $1,400; individual given a 9-month suspended jail sentence and placed on probation for 5 years.

Hurley, Wis.—Selling amphetamine, barbiturates, and Neotresamide without physicians' prescriptions. Firm fined $275; charges against individual dismissed.

Misbranded and Substandard Drugs

Meer Corp., and Ellis Meer, North Bergen, N.J.—Powdered extract of veratrum viride and fluid extract of belladonna root were deficient in declared amounts of the alkaloids of veratrum viride and belladonna root, respectively. Fined $500 each.

Nyrope, Inc., and George B. Ticktin, New York, N.Y.—Shipped aspirin-phenobarbital and phenobarbital tablets deficient in declared amounts of phenobarbital and "Obes-Ebb No. 3" tablets deficient in declared amount of amphetamine sulfate. Firm fined $500; charges against individual dismissed.

False Advertising

The Federal Trade Commission has issued an order forbidding the makers of Doan's Pills, Foster-Milburn Co., Buffalo, N.Y., from advertising these pills as a cure for any diseases or disorders of the kidneys or bladder. The order specifically prohibits representations that: Doan's Pills are a cure or remedy for or will have any therapeutic value in the treatment of any disease, disorder or dysfunction of the kidney or bladder or relieve or have any beneficial effect upon any symptom or condition arising from such infirmities; Doan's Pills will remove or cause the kidney to remove poisonous waste matter or excess acids from the blood or have any beneficial effect on any symptom or condition resulting from these poisons and acids.

INJUNCTION—Four Chicago pharmacies have paid substantial damages to Abbott Laboratories for substituting on Abbott products and have agreed to the entry of permanent injunctions restraining them from further acts of substitution in the filling of prescriptions calling for Nembutal and other Abbott products.

His Views Were Colored

False and misleading curative claims made for his color lamps brought a 90-day jail sentence to Karl von Schilling, an itinerant health lecturer of Los Angeles. Brought to account by the FDA, von Schilling had maintained that various serious diseases and abnormal conditions are caused by specific colors and offered other colors shining from his lamp to offset them. For example, diabetes, jaundice, and consumption were called "yellow diseases" which a green light would cure, while "violet diseases"—laryngitis, goiter, and heart trouble—required a yellow light. His lamp, a modification of a child's toy lantern, had a rotating multicolored cylinder which emanated various colored light rays through a window in its outer shell. It was given to members of his lecture classes on payment of a fee of $32.50 for eight lectures, along with literature and charts.

THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

A.PH.A. Membership Records

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FOREIGN

Adan-Rius, Adelberto, Camaguey, Cuba
Dias, Luis De Sousa, Lisboa, Portugal
Pelaez, Maria C., Medellin, Colombia, S. A.

Deceased Members

Bosta, Joseph F., Monhall, Pa.
Conroy, Peter Joseph, Tuckahoe, N.Y., June 17, 1955
Gavey, Frank R., Dearborn, Mich.
Grice, Herbert, Clearwater, Fla., Jan. 1954
Sheehan, William F., Winchester, Mass., May 11, 1955

With values soaring, now is the time to bring fire coverage up to par and save money at the same time....

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allergic rhinitis, common colds, sinus trouble

Whatever the cause, Benzedrex* Inhaler relieves nasal congestion in seconds.

By displaying 'Benzedrex' in the newly improved counter carton, you can double your sales—easily, quickly, and with a minimum of space.

The new display carton provides more effective display; yet requires 46% less counter space!

New York, N.Y. "Our sales of 'Benzedrex' Inhalers, since we put up the display cartons, are terrific. 'Benzedrex' Inhaler sales have more than doubled; tripled is probably closer to the facts."

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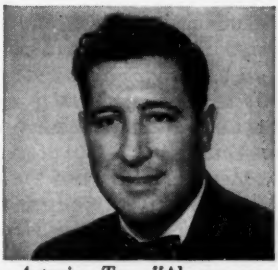

San Antonio, Tex. "Always on my wrapping counter where customers may see it, the display carton has helped triple my sales of 'Benzedrex' Inhalers."

Mario Costantino
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Set up your display TODAY.

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A.PH.A. Manual No. 101 To Assist in Handling Emergencies

THE corner pharmacy was at one time a first-aid station of considerable importance. The advent of the community hospital; police and fire department first-aid services and rapid transportation by ambulance to medical centers; the organization of local rescue squads, Red Cross and Civil Defense units and other emergency aid agencies with excellent equipment, have combined to divert public attention from the pharmacy and even from the physician's office to hospitals and first-aid centers when emergencies arise.

But the pharmacy and the pharmacist are still considered prime sources of information when accidents occur and help is needed badly. The services of the pharmacist in emergencies consist largely of supplying essential information rather than treatment.

One of the baffling difficulties encountered by those who must treat cases of accidental poisoning is the problem of identifying the toxic substance which is causing the injury. Many household products, such as insecticides, rodenticides, polishes and cosmetics contain toxic substances. It is therefore essential to have available a list of possible ingredients of such products to enable the physicians to determine the treatment.

A guest editorial by Irvin Kerlan, M.D., Associate Medical Director of the Food and Drug Administration, appearing in the *Journal of the American Medical Association* for August 13, deals with the subject of accidental poisoning. We have reproduced this editorial on page 502.

The Council of the AMERICAN PHARMACEUTICAL ASSOCIATION decided some time ago to make available to the pharmacists of the United States a pamphlet presenting in concise form the names and ingredients of some of the articles which may exhibit potentialities for harmful effects if accidentally ingested or contacted, or which may cause injury through over-dosage.

In order to effect a wide distribution of this information it was decided to supply such a pamphlet with each copy of The National Formulary and to provide a pocket in the N.F. X convenient for filing the pamphlet for ready reference.

There is no relationship between the purpose of The National Formulary and the purpose of this pamphlet. There is, however, a good reason for supplying it with The National Formulary.

Most states require every pharmacy to have the latest edition of The National Formulary available as a part of the equipment of its prescription department.

Emergencies require prompt location of essential information. This pamphlet fits into the pocket in the back cover of The National Formulary X. Since the N.F. is a required reference book and has a definite place in the prescription department of every pharmacy it is a logical place in which to place a manual of emergency information.

This pamphlet is, of course, not intended to take the place of the more comprehensive reference works on the treatment of poisoning. Its principal virtue lies in the fact that it presents in alphabetical order and with adequate cross references, the most commonly encountered sources of injury from accidental ingestion or contact with poisons, chemicals, drugs and household articles containing toxic substances, and supplies concise information for the guidance of physicians who may call for it to help them identify the substances responsible for the accidental injury and general information as to antidotes which might be useful.

Recently, so-called "poison information centers" have been established in places where continuous service can be given in supplying information as to composition of various articles which may be responsible for toxic symptoms. The Duke Hospita

Poison Control Center in Durham, N.C., the Boston Poison Information Center and the Chicago Poisoning Control Center are typical examples.

Most communities rely on rescue squads, hospital staffs, and on transportation by police to the nearest medical center.

Pharmacists should be familiar with all emergency services in their respective communities and a place has been provided on the inside front cover of this pamphlet for recording such emergency information.

National Formulary X is now ready for distribution. Details as to where and how it may be obtained are given on page 489.

The pamphlet referred to in this editorial will be known as **A.PH.A. Manual No. 101**. It is subject to revision and elaboration. The ASSOCIATION is supplying it on a complimentary basis with each copy of the N.F. X. Separate copies of the pamphlet will be available from the ASSOCIATION office at $1.00 per copy.

Retiring Deans

THE close of the academic year 1954–55 witnessed the retirement of a number of deans of colleges of pharmacy from active teaching and administrative work. Each of these men has contributed substantially to the progress of pharmaceutical education in his state and some have been important figures in the profession at large.

Dr. B. V. Christensen, who retired from the deanship at Ohio State University, has a long record of outstanding achievement as an educator, administrator and research worker. He is a past president of the AMERICAN PHARMACEUTICAL ASSOCIATION and the American Association of Colleges of Pharmacy and served for many years as chairman of the Executive Committee of the A.A.C.P. and as a member of the Council of the A.PH.A. He has a distinguished record as a scientist in the field of pharmacognosy and he is still a member of the American Council on Pharmaceutical Education. Dean Christensen was highly instrumental in raising the standards of pharmaceutical education over the past two decades and pioneered in pre-professional education for pharmacists at Ohio State and Florida Universities. His steadfast espousal of courses in fundamental education for pharmacists on which to build better professional training has been an outstanding contribution to progress in this field.

Dr. Hugh C. Muldoon, also a past president of the American Association of Colleges of Pharmacy, who retired as dean of the School of Pharmacy of Duquesne University, had the distinction of organizing the school over which he presided for more than a quarter of a century. He received the Remington Honor Medal in 1953 for his many notable contributions to American pharmacy and pharmaceutical education. The occasion of the award was made especially notable by Dean Muldoon's speech of acceptance which reviewed the accomplishments of American pharmacy with refreshing emphasis on the achievements of the profession rather than its shortcomings. Dean Muldoon will be long remembered as an orator, interpreter of the ideals and ethics of pharmacy and as an outstanding contributor to the literature of the profession.

Dean William F. Sudro, retiring from active duty as head of the School of Pharmacy of North Dakota Agricultural College, made significant contributions to the development of pharmaceutical education in the Middle Northwest and also gave much of his time to the solution of the problems of the practicing pharmacists of his area. He was for many years secretary of the North Dakota State Pharmaceutical Association and a familiar figure in the Conference of State Pharmaceutical Association Secretaries as well as at district and national meetings of college and board of pharmacy groups.

He served on many state and national committees and all of his contributions to American pharmacy reflect considered judgment and thought based on broad knowledge of the reactions and thinking of the profession in the area served by his institution.

Dr. A. B. Lemon, who has retired as dean of the School of Pharmacy of the University of Buffalo but continues in some of his teaching, pioneered in phases of educational research which have had far-reaching effects on the teaching and testing of pharmacists. He was Dr. W. W. Charters' principal collaborator in the classic survey of the functional aspects of pharmacy which led to the publication of "Basic Material for a Pharmaceutical Curriculum," a piece of research that profoundly influenced the direction of pharmaceutical education when it was still on a two year basis. Dr. Lemon was an early advocate of the comprehensive examination techniques which have since had general acceptance in colleges of pharmacy

and are gaining in acceptance for board of pharmacy examinations. As a member of the New York State Board of Pharmacy and in other capacities, Dean Lemon has left his mark on the development of local, state and national affairs pertaining to pharmacy.

We salute these deans for their outstanding contributions to American pharmacy and we wish for them many years of opportunity to indulge in the hobbies and lighter pursuits which they sacrificed for so many years to serve their fellow pharmacists more abundantly.

Vitamins Are Drugs

FROM time to time the question of classification of vitamin products under pharmacy and food and drug laws has come up in the administration and enforcement of these acts. In general, law enforcement officials have made an intelligent administrative distinction between vitamins and vitamin products *per se* and dietary supplements which may contain some vitamin and mineral substances. However, there have not been a sufficient number of court decisions in the several states to assure positve and universal inclusion of vitamins and vitamin preparations in the drug classification under food and drug laws.

In Minnesota the courts have definitely ruled that vitamins in any form are drugs, and certainly this is a logical classification for any product that is sold with directions for use that clearly imply therapeutic application and medicinal virtues.

The Federal Food and Drug Administration has generally taken the position in interpretation of the Federal Food, Drug, and Cosmetic Act that when vitamins are labeled as drugs they are, in fact, drugs. When they are constituents of Dietary supplements or are sold as food products or as a constituent of food products, they are foods.

Unfortunately someone in the FDA answered a communication from the tax collector of the District of Columbia some time ago to the effect that vitamins are foods, and the communication even went so far as to indicate that iron and other mineral substances are foods regardless of how they may be incorporated in vitamin products. This led the tax officer of the District to rule that vitamin products were taxable as foods under the D.C. sales tax law and caused quite a stir among pharmacists in the District.

Fortunately former A.PH.A. President F. Royce Franzoni and a few of his colleagues among the D.C. pharmacists challenged this interpretation, and after considerable legal maneuvering a D.C. judge has rendered a decision classifying vitamin products and vitamins as drugs and therefore exempt from the retail sales tax. This judgment can be appealed by the tax commissioner so it is not necessarily final, but Mr. Franzoni and his colleagues are to be congratulated on taking the stand they did, and the judge is to be commended for a judicial interpretation which should have come administratively from the Food and Drug Administration in the first instance.

The 1955 Whitney Award

IT IS with pardonable pride that we point to the fact that a member of the Headquarters staff of the AMERICAN PHARMACEUTICAL ASSOCIATION has been honored this year by the Michigan Society of Hospital Pharmacists. The honor comes to Miss Gloria Niemeyer, Secretary of the American Society of Hospital Pharmacists, Assistant Director of the Division of Hospital Pharmacy of the A.PH.A. and A.S.H.P. and Associate Editor of the *Bulletin of the A.S.H.P.*, in the form of the Harvey A. K. Whitney Lecture Award given annually by this Society.

Harvey A. K. Whitney was a pioneer in organizing hospital pharmacists, and the award is given annually in his honor by the Michigan Society for outstanding contributions to the development of hospital pharmacy.

Miss Niemeyer has made major contributions to the development of hospital pharmacy, and she has done this without benefit of trumpets and in the best traditions of the A.PH.A. and the A.S.H.P. We who come in daily contact with her activities at the A.PH.A. headquarters building take much of the hard work and sound judgment which go into her daily performance of routine and special tasks for granted. It delights us greatly to know that her contributions to hospital pharmacy have received this fine recognition on the part of her hospital pharmacy colleagues, and we join them in extending hearty congratulations.

Robert E. Singiser and Hastings H. Hutchins of Merck's Chemical Division report on compatibility of this antihistamine in some dermatologic preparations. . .

Pyrilamine Maleate

Antihistamines such as pyrilamine maleate (Neo-Antergan, Paraminyl, Statomin, Thylogen, etc.) are useful in various topical preparations. This study, presented at the A.PH.A.'s 1955 convention, shows that pyrilamine maleate was stable for as long as a year at room temperature. Where incompatibilities appeared, modified formulations were devised.

PYRILAMINE MALEATE is the generic name for N-*p*-methoxybenzyl-N′-N′-dimethyl-N-*α*-pyridylethylenediamine maleate, an antihistaminic compound useful in dermatology. A concentration of 1.5% pyrilamine maleate was used exclusively since this is approved for proprietary formulations intended for over-the-counter sale.

The compatibility of pyrilamine maleate was studied in a variety of dermatologic lotion and ointment vehicles prepared with older and the newer vehicle components. Where incompatibilities or physical problems were encountered, experiments were conducted with an aim toward correcting the difficulty.

Wherever possible ointment bases were prepared by simple fusion. Emulsion bases were prepared by mixing the melted fats and waxes with a heated aqueous solution of the soluble components. When the emulsified mixture was cool, pyrilamine maleate was incorporated by stirring. The final product was then passed through a roller mill to assure homogeneity.

At a concentration of 1.5%, pyrilamine maleate offered no formulation difficulties in the bases listed in Table I. Previously (1) pyrilamine maleate was satisfactorily formulated with a wide variety of gums to produce stable pharmaceutical jellies.

Pyrilamine maleate, 1.5%, could not be satisfactorily incorporated in many common emulsion bases. Bases found to be incompatible were: hydrophilic ointment U.S.P. XIV and some modifications (2), Ohmart-Stoklosa lotion, Schobel-Lichtin lotion vehicles (3). Beeler's base, Landon-Zopf base (4), and those emulsion systems listed in Table II. Separation, grainy appearance, or stiff and lumpy texture were the physical incompatibilities observed. Hydrophilic ointment U.S.P. XIV initially cracked and was grainy. Milling several times appeared to yield an acceptable preparation.

Aqueous solutions of pyrilamine maleate were observed to be incompatible with alkaline emulsifying agents such as sodium borate, sodium lauryl sulfate, sodium hydroxide and triethanolamine. At *p*H 7.5 or higher, pyrilamine maleate is converted to the free base, which separates as an oily liquid. The incompatibility frequently could be overcome in formulation by adding pyrilamine maleate to the emulsion base as a powder or combined with suitable stabilizer. Formulations containing pyrilamine maleate generally required more emulsifying agent than would normally be used, unless the formulations contained either an emulsion stabilizer or an acid stabilizer. Natural and synthetic gums and the high molecular weight polyethylene glycols were found to be useful stabilizers. Polawax, an acid-stabilized, self-emulsifying wax, was also effective.

Table III lists compatible emulsion base formulations. Some of these formulas are Table II bases that were modified to give acceptable preparations. Standard pharmaceutical techniques, as previously described, were used to prepare all bases except those containing Methocel 1500^{c}. In preparations that contained Methocel, a jelly was prepared with the gum and the pyrilamine maleate in approximately 40% of the water; this was thoroughly incorporated into a base composed of the remaining ingredients. Milling the final product was desirable to assure uniform distribution of the jelly.

Formula A represented a modification of Base 1 with Methocel 1500, 0.5%, added to protect the emulsion system. Formula B with polyethylene glycol 4000 was also a base 1 modification. Both of these formulations produced excellent vanishing creams that had good consistency and high

Table I—Bases Compatible with 1.5% Pyrilamine Maleate

	Formula Amounts in Grams							
	I	II	III	IV	V	VI	VII	VIII
Pyrilamine maleate	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Silicote ointment[a]	98.5	..	..	..	..	..	..	..
Plasticized-hydrocarbon gel 50W[b]	..	98.5	..	..	..	..	..	..
Plastibase hydrophilic[b]	..	..	50.0	..	..	..	..	..
Calamine lotion, U.S.P. XIV	..	..	..	..	..	..	98.5	..
Calamine lotion, U.S.P. XV*	..	..	..	..	..	..	..	98.5
Polyethylene glycol 1500	..	..	..	53.5	..	..	..	..
Polyethylene glycol 4000	..	..	..	9.0	..	..	..	..
Propylene glycol	..	..	..	33.0	..	..	..	..
Zinc stearate	..	..	..	1.0	..	..	..	..
Cetyl alcohol	..	..	..	2.0	..	..	..	..
Silicone-polyethylene glycol base	..	..	..	..	98.5	..	..	..
Lanolin, anhydrous	..	..	..	..	..	20.0	..	..
White petrolatum	..	..	..	..	..	73.5	..	..
White wax	..	..	..	..	..	5.0	..	..
Distilled water	..	..	48.5	..	..	..	..	..

* Formula (Goldstein) in U.S.P. XV page proof, not in U.S.P. XV.
[a] Arnar-Stone Laboratories, Inc., Evanston, Ill.
[b] E. R. Squibb and Sons, New York, N.Y.

sheen. Methocel 1500 added to Base 2 also protected the emulsion and produced a good vanishing cream. Formula C[i] shows this addition.

Table II—Emulsion Bases Incompatible with 1.5% Pyrilamine Maleate

Base	Emulsion Components	Type of Base
1	Stearic acid, potassium carbonate, water	Vanishing cream
2	Sodium lauryl sulfate, triethanolamine, cetyl alcohol, stearyl alcohol, water	Vanishing cream
3	Stearic acid, Tween 60, Span 60, water	Vanishing cream
4	Sodium borate, sodium lauryl sulfate, cetyl alcohol, petrolatum, water	Hydrophilic base
5	Ceramol,[d] liquid petrolatum, water	Cold cream
6	Tegin,[e] liquid petrolatum, water	Cold cream
7	Ceramol, Diglycol stearate S,[f] liquid petrolatum, water	Lotion
8	Polawax,[g] liquid petrolatum, water	Lotion
9	Polawax, Tegacid,[e] liquid petrolatum, water	Lotion
10	Tegin, cetyl alcohol, water	Vanishing cream
11	Tegacid, water	Vanishing cream
12	Ceramol, cetyl alcohol, water	Vanishing cream
13	Aquaphor,[h] water	Hydrophilic base

[c] The Dow-Chemical Co., Midland, Mich.
[d] Aceto Chemical Co., Inc., Flushing, N. Y.
[e] Goldschmidt Chemical Corp., New York, N. Y.
[f] Glyco Products Co., Inc., Brooklyn, N. Y.
[g] Croda, Inc., New York, N. Y.
[h] Duke Laboratories, Inc., Stamford, Conn.

Formulas D and E were good consistency cold creams having no tendency for separation of the petrolatum fraction at room temperature. Both of these formulations were acceptable replacements for Base 5 or 6. Formula E exhibited better stability at 40°.

Lotion Formula F, derived from calamine lotion U.S.P. XIV, again showed the value of the polyethylene glycols. This lotion did not separate, was not oily, spread very easily, and showed good heat stability.

Bases 10, 11, and 12 became very stiff and lumpy when combined with 1.5% pyrilamine maleate. Formula G handled this incompatibility and produced a smooth vanishing cream with very little sheen. Again, Methocel 1500 stabilized the emulsion. Tegin, 15%, could be used to replace the Polawax in Formula G.

A hydrophilic ointment compatible with pyrilamine maleate was prepared using Formula H. This is a modification suggested by Ohmart (5) for hydrophilic ointment U.S.P. XIV. Several other recommended modifications (2) replacing the polysorbate 80 with Myrj 52[i] or a Tween 60–Span 60 combination were unsatisfactory as they became very stiff and lumpy after short storage periods.

The Landon-Zopf base also produced a very stiff ointment with pyrilamine maleate. The Canadian Formulary base (Formula I), similar to the Landon-Zopf base, combined with pyrilamine maleate to produce an unctuous ointment of good consistency.

Formula J, with Methocel 1500, is the recommended modification for Base 13. Without the

[i] Atlas Powder Co., Wilmington, Delaware.

Table III—Emulsion Formulations Compatible with 1.5% Pyrilamine Maleate

	Formula All amounts in Grams									
	A	B	C	D	E	F	G	H	I	J
Pyrilamine maleate	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Stearic acid	20.0	20.0	..	..	..	..	..	..	..	..
Stearyl alcohol	..	..	10.0	..	..	..	..	25.0	20.8	..
Cetyl alcohol	..	..	3.5	..	..	..	..	..	..	..
Spermaceti	..	..	10.0	..	..	..	..	..	..	..
White wax	..	..	..	9.0	20.0	..	5.0	..	..	..
Polawax	..	..	..	9.0	..	..	10.0	..	..	..
Sodium borate	..	..	..	..	1.0	..	..	..	..	..
Sodium lauryl sulfate	..	..	1.0	..	..	..	..	..	0.6	..
Triethanolamine	..	..	0.7	..	..	..	..	..	..	..
Potassium carbonate	1.0	1.0	..	..	..	..	..	..	..	..
Polysorbate 80	..	..	..	..	..	..	..	5.0	..	..
Glycerin	5.0	5.0	12.0	..	..	..	10.0	..	17.0	5.0
Propylene glycol	..	..	..	..	..	..	..	12.0	..	..
Polyethylene glycol 400	..	..	..	..	..	7.3	..	..	..	..
Polyethylene glycol 4000	..	10.0	..	..	..	..	..	..	11.2	..
Polyethylene glycol—400 monostearate	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	2.3	..	..	..	..
Methocel 1500	0.5	..	0.5	..	..	..	0.5	..	..	0.5
Liquid petrolatum	..	..	..	37.0	54.0	..	..	..	..	..
White petrolatum	..	..	..	..	..	..	..	25.0	..	..
Aquaphor	..	..	..	..	..	..	..	..	..	35.0
Preservatives	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*	*q.s.*
Distilled water *q.s.*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Methocel this hydrophilic base lost its water absorption capacity.

Pyrilamine maleate is generally considered to be chemically stable in aqueous solution (6) and under anhydrous conditions (7). Nevertheless, the stability of pyrilamine maleate was determined in six different classes of bases as part of this study. These were: calamine lotion U.S.P. XIV, a polyethylene glycol ointment (Base IV, Table I), a petrolatum ointment (Base VI, Table I), a sodium alginate jelly, a vanishing cream (Formula C, Table III), and a cold cream (Formula D, Table III). No significant decomposition was observed by the ultraviolet assay method (6) in any of the bases during storage at room temperature for one year. These data are summarized in Table IV.

Table IV—Stability of Pyrilamine Maleate in Six Bases

Base	% Loss During Storage at Room Temperature After 3 Months	After 6 Months	After 12 Months
Calamine lotion U.S.P. XIV	8	1	3
Polyethylene glycol base	...	5	4
Petrolatum base	3	4	7
Sodium alginate jelly	...	5	2
Vanishing cream	0	0	3
Cold cream	...	3	0

Summary

Pyrilamine maleate, an antihistamine useful in dermatology, has been studied in various topical preparations at a 1.5% concentration. Pyrilamine maleate was found to be compatible with petrolatum bases, silicone bases, polyethylene glycol bases, jellies made from natural and synthetic gums, and several commercial bases. In the emulsion bases incompatibilities such as separation, graininess, and other physical changes were observed during storage at room temperature and 40°. Methods for correcting these incompatibilities, often with only slight formula modifications, are described. General methods for preparation of acceptable products are suggested. Advantages are shown for including acid-stabilizers or emulsion-stabilizers in the formulas. Assay data obtained during storage for one year at room temperature indicates that pyrilamine maleate is stable in a wide variety of topical formulations.

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(5) U.S.P. Subcommittee No. 9, Bulletin 17, p. 55.
(6) Anderson, L. T., Gakenheimer, W. C., Rosenblum, C., and Smith, E. H., THIS JOURNAL, *Sci. Ed.*, **38**, 373(1949).
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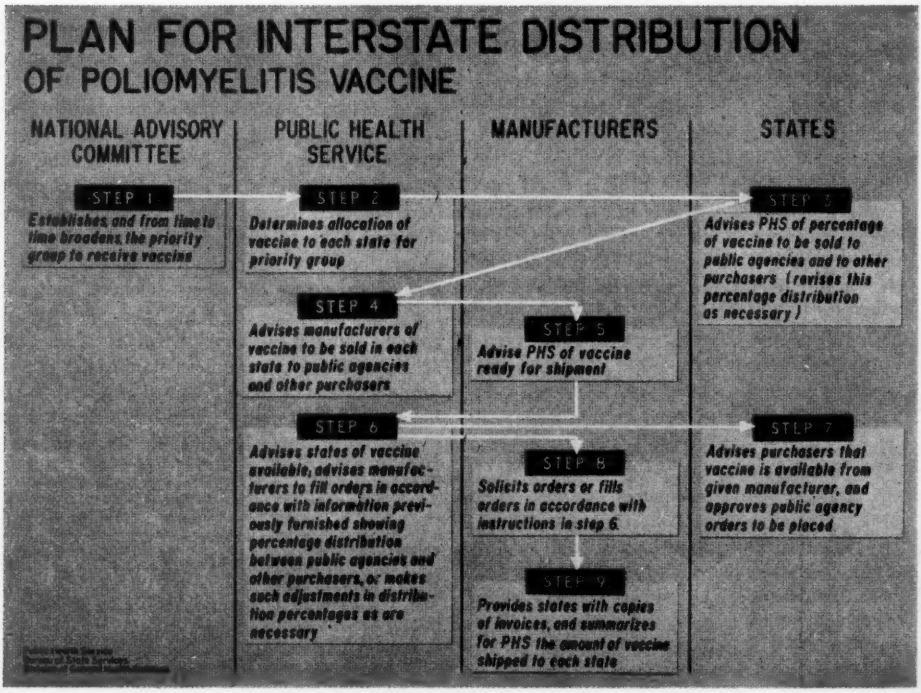
The Salk Vaccine Situation

Out of the welter of confusion created by the premature announcements, subsequent revision of estimates of available vaccine, the necessity for developing new and better safety tests and procedures, congressional and administrative action affecting public and private distribution of the Salk poliomyelitis vaccine has finally emerged.

EARLY in the development of the program for adequate distribution of the Salk vaccine, the Secretary of the Department of Health, Education, and Welfare appointed a National Advisory Committee on Poliomyelitis Vaccine for the purpose of working out a plan for distribution to become effective when the supply of the vaccine would be sufficient to warrant its commercial distribution. The National Foundation for Infantile Paralysis had contracted with the six manufacturers producing the vaccine to supply the first two doses of the three dose immunization for children between 5 and 9 years of age.

It is unnecessary to review at this point the difficulties encountered in supplying this vaccine and the postponement of its administration in various parts of the country. Suffice it to say at this time that commitments of some manufacturers to the Foundation have been completed, and the passage of the legislation by the Congress, signed by the President on August 12, provided the sum of $30 million for distribution to the states for the purchase of poliomyelitis vaccine between August 12, 1955, and February 15, 1956. The situation is to be reviewed by the Congress after this date.


PLAN FOR INTERSTATE DISTRIBUTION
OF POLIOMYELITIS VACCINE
NATIONAL ADVISORY COMMITTEE
PUBLIC HEALTH SERVICE
MANUFACTURERS
STATES
STEP 1
Establishes and from time to time broadens the priority group to receive vaccine
STEP 2
Determines allocation of vaccine to each state for priority group
STEP 3
Advises PHS of percentage of vaccine to be sold to public agencies and to other purchasers (revises this percentage distribution as necessary)
STEP 4
Advises manufacturers of vaccine to be sold in each state to public agencies and other purchasers
STEP 5
Advise PHS of vaccine ready for shipment
STEP 6
Advises states of vaccine available, advises manufacturers to fill orders in accordance with information previously furnished showing percentage distribution between public agencies and other purchasers, or makes such adjustments in distribution percentages as are necessary
STEP 7
Advises purchasers that vaccine is available from given manufacturer, and approves public agency orders to be placed
STEP 8
Solicits orders or fills orders in accordance with instructions in step 6
STEP 9
Provides states with copies of invoices, and summarizes for PHS the amount of vaccine shipped to each state

RETAILERS' REPORT FORM

Exhibit 4

PHS-2454
7-55

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

FORM APPROVED
BUDGET BUREAU NO. 68-R375

RETAIL PHARMACY OR SURGICAL SUPPLY HOUSE REPORT OF POLIOMYELITIS VACCINE RECEIVED AND SOLD

INSTRUCTIONS: Prepare in duplicate on Friday of each week in which vaccine has been received or sold. Retain one copy for your files. MAIL THE ORIGINAL TO THE STATE HEALTH OFFICER OR OTHER PERSON DESIGNATED BY HIM. If vaccine is sold in different States, list the purchasers from each State on a separate form and mail to the appropriate State Health Office or other person designated by him. This report need *not* be submitted for vaccine shipped directly to a physician by a manufacturer even though the physician is billed through the retail pharmacy or surgical supply house.

Insert in *Columns 7 and 12* the number appearing on the vial which is usually called the 'lot number.'

Insert in *Column 8* the number of cc's received from the lot number shown in *Column 7.*

Insert in *Column 13* the number of cc's sold to the purchaser shown in *Column 10.*

Additional copies of this form may be obtained from your State Health Department.

1. NAME OF PHARMACY OR SURGICAL SUPPLY HOUSE *(Street, County and City)*	2. REPORT FOR WEEK ENDING
3. ADDRESS *(Street, County and City)*	4. NUMBER OF CC'S OF VACCINE ON HAND AT END OF WEEK COVERED BY THIS REPORT

VACCINE RECEIVED DURING WEEK

5. DATE OF RECEIPT	6. NAME OF MANUFACTURER	7. LOT NUMBER	8. NUMBER OF CC'S RECEIVED

VACCINE SOLD DURING WEEK

9. DATE OF SALE	10. NAME AND ADDRESS OF PURCHASER *(Street, County and City)*	11. NAME OF MANUFACTURER	12. LOT NUMBER	13. NUMBER OF CC'S SOLD

The plan for interstate distribution is graphically portrayed in the chart on page 480.

The Act passed by the Congress providing for distribution of the vaccine is printed in full beginning on page 482.

Fund Allotment to States

Allotments available to states up to February 15, 1956, under the Poliomyelitis Vaccination Assistance Act of 1955 have been arranged as follows: Alabama, $986,907; Arizona, $209,167; Arkansas, $646,637; California, $1,597,864; Colorado, $240,586; Connecticut, $246,065; Delaware, $42,118; District of Columbia, $100,608; Florida, $677,027; Georgia, $992,329; Idaho, $138,225; Illinois, $1,133,062; Indiana, $640,435; Iowa, $490,128; Kansas, $361,222; Kentucky, $800,637; Louisiana, $764,696; Maine, $200,910; Maryland, $385,123; Massachusetts, $686,853; Michigan, $1,007,656; Minnesota, $593,448; Mississippi, $917,196; Missouri, $661,848; Montana, $115,672; Nebraska, $245,862; Nevada, $25,541; New Hampshire, $88,295; New Jersey, $644,386; New Mexico, $201,754; New York, $1,727,103; North Carolina, $1,257,807; North Dakota, $160,718; Ohio, $1,167,504; Oklahoma, $489,949; Oregon, $269,842; Pennsylvania, $1,570,896; Rhode Island, $115,211; South Carolina, $701,198; South Dakota, $156,769; Tennessee, $863,814; Texas, $1,714,995; Utah, $166,281; Vermont, $78,718; Virginia, $768,384; Washington, $384,315; West Virginia, $488,270; Wisconsin, $610,539; Wyoming, $56,069; Alaska, $77,240; Hawaii, $100,359; Puerto Rico, $1,169,790; Virgin Islands, $10,941; Canal Zone, $15,702; Guam, $22,751; American Samoa, $12,758.

When Salk vaccine becomes available for distribution through the customary channels of private enterprise, pharmacists will be required to make certain records and reports of vaccine received and sold. A copy of the form on which reports must be prepared in duplicate on Friday of each week in which vaccine has been re-

Salk Vaccine

• • • • • • • • *from preceding page*

ceived or sold is reproduced on page 481. The copy must be retained by the pharmacist in his files and the original must be mailed to the state health officer or the person designated by him.

With each shipment of vaccine from the manufacturer to the pharmacist there will come copies of the form referred to above for use in recording the required information.

The Department of Health, Education, and Welfare announced on July 31 that the voluntary plan for allocation of the Salk vaccine has become effective. Just preceding this announcement the National Foundation for Infantile Paralysis indicated that its immediate summertime needs for poliomyelitis vaccine had been met and that it would not require all of the vaccine which had been released for use.

It is now the function of the individual states to determine how vaccine made available to them is to be distributed. The proportion of the vaccine made available to each state which is to go to public agencies, such as local health departments, and the amount to be distributed by manufacturers through normal drug channels for use by private physicians will be determined by each state.

Early in the distribution program the governor of each state was asked to name the person or agency who was to act for the state in making the request for vaccine and supervising the distribution. In most instances the governors have designated the state health officer to take over this function. Each state has been asked to set up its own advisory committee consisting of representatives of the medical and pharmaceutical professions, the health department, and other agencies concerned. While there is no uniformity in the plans that have been evolved in the various states, they follow the general pattern of giving priority to the age group of 5 through 9 because they are the most susceptible to poliomyelitis.

The American Medical Association has requested all physicians to vaccinate only children in this age group until further advised. The National Advisory Committee on Poliomyelitis Vaccine has recommended that the priority group be broadened to increasingly include both younger and older children.

Allocation of vaccine by states has been based on a formula which takes into consideration two injections for the estimated population of the priority group within the state.

Based on the estimated number of persons in each state requiring booster injections of the vaccine, the Public Health Service will, at a time specified by the National Advisory Committee, make an additional allotment of vaccine to each state to permit administration of booster injections to such persons.

POLIOMYELITIS VACCINATION ASSISTANCE ACT

Public Law 377—84th Congress

Chapter 863—1st Session, S. 2501

AN ACT to provide grants to assist States to meet the cost of poliomyelitis vaccination programs, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Poliomyelitis Vaccination Assistance Act of 1955."

Authorization of Appropriations

SEC. 2. There is hereby authorized to be appropriated, to remain available until February 15, 1956, such sums as may be necessary for making payments to States which have submitted, and had approved by the Surgeon General, applications for grants under this Act.

Allotments to States

SEC. 3. (a) From the sums appropriated pursuant to section 2, the Surgeon General shall allot to each State which has an application approved pursuant to section 4—

(1) an amount equal to 33⅓ per centum of the number of unvaccinated eligible persons in such State multiplied by the product of (A) the cost of the poliomyelitis vaccine per eligible person, and (B) the State's allotment percentage; and

(2) an additional amount equal to 20 per centum of allotments available to the State under paragraph (1) of this subsection, such additional amount to be available for expenditure only in accordance with the provisions of section 6 (b) of this Act.

(b) A State's allotment percentage shall be equal to the per capita income of the United States divided by the per capita income of the State. Such percentage shall be determined by the Surgeon General on the basis of information furnished by the Department of Commerce; except that the allotment percentage for Hawaii shall be 100 per centum and for Alaska, Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Canal

Zone shall be equal to the allotment percentage determined above for the one of the forty-eight States which has the lowest per capita income.

State Applications for Funds

SEC. 4. The Surgeon General shall approve the application of any State for payments under this Act if such application—

(a) provides that all poliomyelitis vaccine purchased with funds paid to the State under this Act shall be used for the vaccination of eligible persons pursuant to a plan which sets forth the method or methods by which vaccinations will be made available within the State (through public agencies, approved nonprofit organizations, private physicians, or otherwise): *Provided*, That the Surgeon General may, for the purpose of assuring the most effective and equitable distribution and use of available supplies of poliomyelitis vaccine, establish categories of eligible persons to be accorded priority in receiving an opportunity for vaccination against poliomyelitis; and, except to the extent that the Surgeon General authorizes deviations from such categories, during any period in which any categories have been so established, all vaccine acquired by any State through assistance provided pursuant to this Act shall be made available only to persons within any such category;

(b) provides that in poliomyelitis vaccination programs conducted by public agencies in the State no means test or other discrimination based on financial ability of individuals will be imposed to limit the eligibility of persons to receive vaccination against poliomyelitis;

(c) provides for administration or supervision of administration of the plan included in the application by a single State agency;

(d) provides that the State agency will make such reports, in such form and containing such information, as the Surgeon General may from time to time reasonably require to carry out his functions under this Act, and comply with such provisions as he may from time to time find necessary to assure the correctness and verification of such reports; and

(e) provides such accounting, budgeting, and other fiscal methods and procedures as are necessary for the proper and efficient administration of the plan.

Payments to States

SEC. 5. The Surgeon General shall from time to time estimate the amount to be paid to each State under the provisions of this Act for any period, and shall pay such amount to such State, from the allotment available therefor, reduced or increased, as the case may be, by any sum (not previously adjusted under this section) by which he finds that his estimate of amount to be paid to the State for any prior period under this Act was greater or less than the amount which should have been paid to the State for such prior period under this Act. Such payments shall be made in such installments as the Surgeon General may determine.

SEC. 6. (a) Funds paid to a State from that part of its allotment computed in accordance with section 3 (a) (1) of this Act may be used solely for the purchase, prior to February 15, 1956, of the poliomyelitis vaccine for use in carrying out the plan set forth in the application of such State approved pursuant to section 4.

(b) Funds paid to a State from that part of its allotment computed in accordance with section 3 (a) (2) of this Act may be used prior to February 15, 1956, only for planning poliomyelitis vaccination programs within the State and for conducting such programs through public agencies in the State in accordance with the plan set forth in the application of such State approved pursuant to section 4; except that any part of such funds determined by the State to be in excess of the amount necessary for such purposes may be used for the purposes specified in subsection (a) of this section.

(c) Nothing in this Act shall limit funds granted to a State under other provisions of Federal legislation from being available to purchase poliomyelitis vaccine or to plan and conduct poliomyelitis vaccination programs in accordance with approved State plans applicable to such grants.

Furnishing of Vaccine by Surgeon General

SEC. 7. At the request of any State the Surgeon General may use all or any portion of the allotment of such State under this Act for the purchase, in accordance with State specifications, of the poliomyelitis vaccine, to be furnished to the State in lieu of such State's allotment (or such portion thereof). Vaccine so furnished shall be subject to the same requirements as to use as vaccine purchased from payments to States pursuant to this Act.

Diversion of Federal Funds

SEC. 8. Whenever the Surgeon General, after reasonable notice and opportunity for hearing to the State agency administering or supervising the administration of the plan included in the application of such State approved under section 4, finds that—

(a) Such State agency is not complying substantially with the provisions of this Act or the terms and conditions of its approved application; or

(b) any funds paid to such State or supplies of vaccine furnished to it under this Act have been diverted from the purposes for which paid or furnished; the Surgeon General shall notify such State agency that no further payments will be made (or no further supplies of vaccine will be furnished) to the State under this Act until he is satisfied that there is no longer any failure to comply or the diversion has been corrected or, if compliance or correction is impossible, until such State agency repays or

(Continued on page 511)

Inventory for ALLERGY RELIEF

Allergies, particularly hay fever, are a current topic of interest. The pharmacist is here given

- **a concise review**
- **a tabulation of currently used antihistamines**
- **a geographic index to ragweed pollen**

By Samuel W. Goldstein

RAGWEED is in bloom again! This most publicized supplier of allergenic pollen makes millions of people acutely aware of allergy during its flowering period. Over 17 millions of Americans have various allergic conditions throughout the year. Many of these and millions more feel the effects of the added release of histamine due to the reaction of ragweed pollen. This is the time when newspapers print the pollen count so eagerly followed by their readers, even though the only information the report gives is why yesterday produced more or fewer sneezes. It is no guide to expectant sternutatory action.

Allergens Classified

Allergenic substances are classified as: *inhalants* (pollen from trees, grasses, ragweed, mold spores, dusts, animal dandruff, etc.); *ingestants* (usually foodstuffs to most, poisons to some); *injectants* (penicillin, antitoxins or antibacterial sera, liver, hormones, etc.); *contactants* (poison ivy, oak or sumac, fabrics, cosmetics and topical drug preparations, etc.).

What can be done about allergies? If the pharmacist recognizes symptoms indicating an allergic condition (running nose, tearful and irritated eyes, hives, asthmatic breathing, etc.) he should recommend a visit with the family physician, who can conduct a series of diagnostic tests to discover the causative agent or agents or condition, or he can send the patient to a testing clinic. Of course he must be aware that many of these symptoms are similar to those observed in the early stages of the common cold. In many cold cases there is a secondary allergic condition due to the reaction of the toxins liberated by the cold virus or viruses freeing histamine to attack the "shock" centers and tissues of the body. Once established as a definite allergy case several courses of action are available: removal of the offending allergen (air filters for inhalant type, avoiding indicated foods, animals, cosmetics, etc.); removal of the individual (vacationing during seasonal affliction or moving to low-pollen area—see map for ragweed pollen information); attempting to reduce or eliminate sensitization; treating patient to alleviate discomforting symptoms.

Treatment

The patient can be treated with increasing doses of the allergenic agent to reduce the sensitization reaction. "Pollen antigens extracts," "allergenic protein extracts" and other allergenic products for diagnostic use and hyposensitization treatments are available from suppliers listed under these headings in the "Blue" and "Red" books available to all pharmacies.

The physician may rely on the use of other agents: vasoconstrictors (epinephrine, ephedrine,

Latest count available

Ragweed Pollen Index

Index figures indicate lowest and highest pollen counts in each state, and are based on three factors which directly affect individual pollen exposure: length of season, maximum aerial concentration of pollen, and total pollen catch on test slides throughout the season.

Any city or community having an index above 10 is unsatisfactory, between 5 and 10 is fairly good, below 5 is good, below 1 is excellent.

American Foundation for Allergic Diseases, 274 Madison Avenue, New York 16, New York.

Continued on next page

Inventory for

ALLERGY RELIEF

racephedrine, naphazoline, amphetamine, etc.); sympathomimetics (ephedrine, epinephrine, etc.); bronchodilators (aminophylline, isopropyl epinephrine, etc.); iodides in asthma, to relieve hypersecretion of tenacious mucus by the bronchial glands; hormones (ACTH, cortisone, hydrocortisone, prednisone, prednisolone, etc.) to modify the reacting tissue so that it responds less to the antigen-antibody reaction producing allergy symptoms.

Antihistamines

Prescribed and used more than any other group of drugs for the alleviation of allergy symptoms are the antihistaminic drugs accounting for $1.6 million in annual sales. The knowledge that histamine or a histamine-like substance is released in the tissues in allergic reactions has led to the development of these histamine antagonists. The large number of antihistamine products and preparations available to the prescribing physician makes the following tabulation, on pages 486, 487, 490, useful to the pharmacist.

Readily available for thorough or brief reviews in the field of allergies, particularly with respect to the present season, are the following publications:

Hay Fever and What You Can do About It (10¢) and *Handbook for the Asthmatic* (25¢), available from American Foundation for Allergic Diseases, Inc., 274 Madison Avenue, New York, N.Y.

"Pollen Prevalence and Pollen-Free Areas," by Oren C. Durham, *J.A.M.A.*, **148,** 716(Mar. 1, 1952).

Regional Allergy of the U.S., Canada, Mexico and Cuba, a Symposium of 39 contributors, edited by Max Samter and Oren C. Durham. Published by Charles C Thomas, Springfield, Ill., 1955, $8.50.

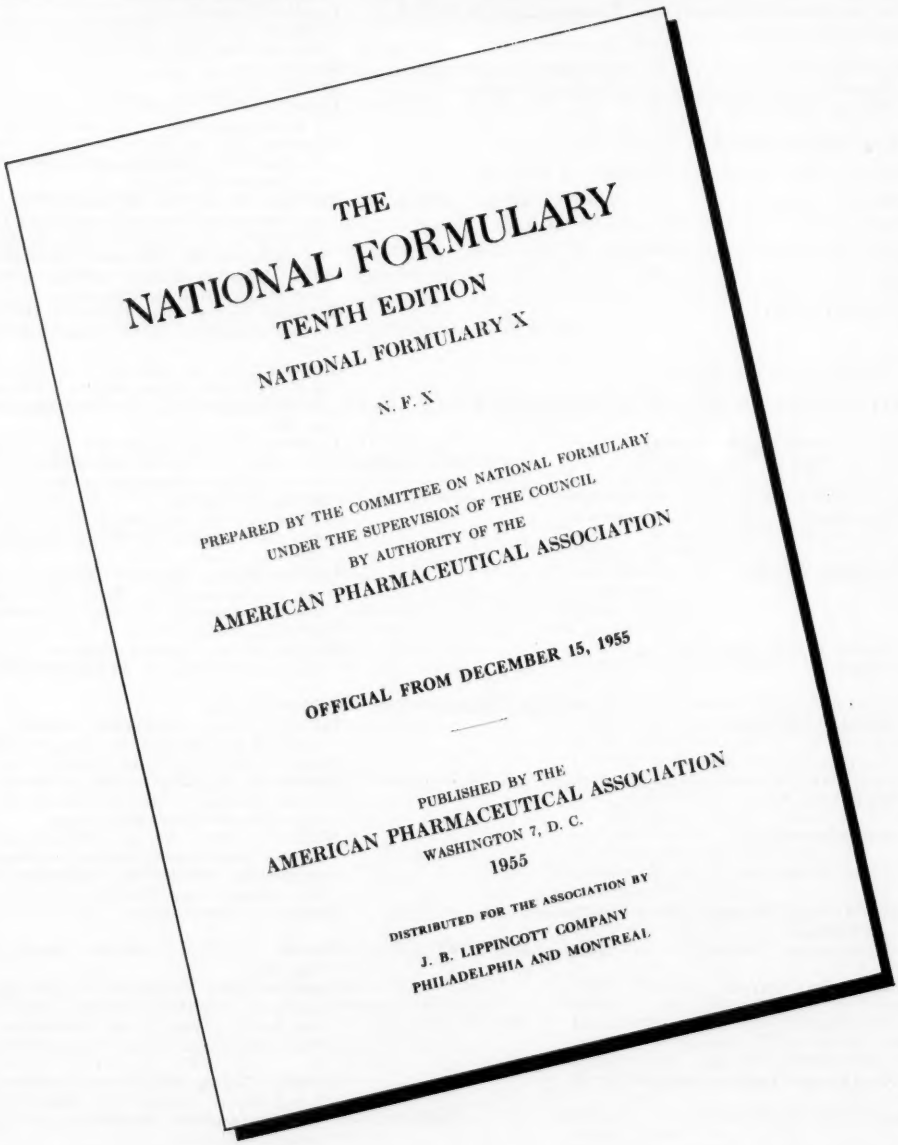
List of Currently Used Antihistaminic Preparations

Trade Name	Generic Name	Dosage Forms
Ambodryl (Parke, Davis)	Bromodiphenhydramine HCl	**Kapseals:** 25 mg.; **Parenteral** (i.v. or i.m.) 10-cc. vials, 5 mg./cc.
Amsalin (Neisler)		**Capsules:** 12 mg. thenylpyramine HCl + 12 mg. pyrilamine maleate + 15 mg. salicylamide + 1 mg. *d*-amphetamine phosphate
Anahist (Anahist)	Thonzylamine HCl U.S.P.	**Tablets:** 25 mg.
Anthallan (Medico-Chemico)	Dibutylaminomethyltrihydroxybenzofuranone	**Capsules:** 85 mg.
Antistine (Ciba)	Antazoline HCl U.S.P.	**Tablets:** 100 mg.; **Solution** (*nasal*): 5 mg./cc.
	Antazoline phosphate N.N.R.	**Solution Ophthalmic:** 5 mg./cc.
Barbahist (Raymer)		**Tablets:** 12.5 mg. pyrilamine maleate + 24 mg. ephedrine sulfate + 8 mg. phenobarbital + 65 mg. aminophylline
Benadryl (Parke, Davis)	Diphenhydramine HCl U.S.P.	**Capsules:** 25 mg.; **Kapseals and Emplets:** 50 mg.; **Elixir:** 10 mg./4 cc.; **Parenteral:** 10- and 30-cc. vials, 10 mg./cc.; Benadryl HCl *vials:* ½ oz.; **Kapseals:** 50 mg. + 10 mg. ephedrine sulfate
Benadryl with Ephedrine (Parke, Davis)		**Kapseals:** 50 mg. diphenhydramine + 10 mg. ephedrine sulfate
Bena-Fedrin (Parke, Davis)		**Liquid** (*nasal*): Benadryl HCl 0.1% + ephedrine HCl 1% + Chloretone 0.5%
Bristamin (Bristol)	Phenyltoloxamine dihydrogen citrate	**Tablets:** 25 and 50 mg.
Chlorothen Citrate (Whittier)	Chlorothen citrate U.S.P.	**Tablets:** 25 mg.
Chlor-Trimeton Maleate (Schering)	Chlorpheniramine maleate U.S.P. (chlorprophenpyridamine maleate)	**Tablets:** 4 mg.; **Repetabs:** 4 + 4 mg. **Parenteral:** 1-cc. ampul, 10 mg./cc.; 2-cc; ampul, 100 mg./cc.; **Syrup:** 2 mg./4 cc.
Chlor-Trimeton R.A. with Sodium Pentobarbital (Schering)		**Repetabs:** 4 + 4 mg. chlorpheniramine + 50 mg. sodium pentobarbital
Clistin Maleate (McNeil)	Carbinoxamine maleate N.N.R.	**Tablets:** 4 mg.; **R-A Tablets:** 4 + 4 mg.; **Elixir:** 4 mg./5 cc.
Copsamine (Durst)	Pyrilamine maleate U.S.P.	**Tablets:** 25 mg.
Co-Pyronil (Lilly)		**Pulvules:** 15 mg. Pyronil + 25 mg. Histadyl + 12.5 mg. Clopane HCl; **Pulvules** (*Pediatric*): One-half strength; **Suspension:** 7.5 mg. + 12.5 mg. + 6.25 mg./5 cc.

Corenil (McNeil)		**Tablets:** 25 mg. methapyrilene HCl + 7.5 mg. extract belladonna + 1.25 mg. *dl*-desoxyephedrine HCl
Decapryn (Merrell)	Doxylamine succinate U.S.P.	**Tablets:** 12.5 and 25 mg.; **Syrup:** 6.25 mg./5 cc.
Diatrine HCl (Warner-Chilcott	Methaphenilene HCl N.F.	**Tablets:** 50 mg.
Dibistine (Ciba)		**Tablets:** 50 mg. antazoline HCl + 25 mg. tripelennamine HCl
Diminic (Durst)		**Tablets:** 25 mg. pyrilamine maleate + 25 mg. methapyrilene HCl
Di-Paralene HCl (Abbott)	Chlorcyclizine HCl U.S.P.	**Tablets:** 25 and 50 mg.
Duo-Pyril (Rowell)		**Capsules:** 12.5 mg. pyrilamine maleate + 12.5 mg. methapyrilene HCl
Foralamin (Eaton)	Methafurylene fumarate	**Tablets:** 50 mg.
Harv-Amine (Harvey)	Pyrilamine maleate U.S.P.	**Tablets:** 25 mg.
Hisdrin (Massengill)		**Tablets:** 50 mg. methapyrilene + 2.5 mg. *d*-desoxyephedrine
Hista-Clopane (Lilly)		**Pulvules:** 25 mg. Histadyl + 12.5 mg. Clopane HCl; **Solution:** Histadyl 0.5% + Clopane HCl 0.5%
Histadyl (Lilly)	Thenylpyramine (methapyrilene)	**Pulvules:** 25, 50 and 100 mg.; **Syrup:** 6 mg. fumarate (4 mg. hydrochloride)/cc.; **Parenteral:** 1- and 10-cc. vials, 20 mg./cc.; **Solution** 5%; **Ointment Ophthalmic** 5%; **Pulvules:** 25 mg. + 8 mg. ephedrine HCl; also double strength
Histafed (Cole)		**Capsules:** 25 mg. thenylpyramine HCl + 8 mg. ephedrine HCl + 10 mg. ascorbic acid
Histalme Duracaps (Meyer)		**Capsules:** 75 mg. pyrilamine maleate + 0.12 mg. hyoscyamine HBr + 0.024 mg. hyoscine HBr + 2.3 mg. *d*-amphetamine sulfate
Hista-Novalene (Professional)		**Tablets:** 20 mg. pyrilamine + 3/8 gr. ephedrine + 1/4 gr. sodium phenobarbital + 2.5 gr. potassium iodide + 2.5 gr. calcium lactate
Hyadrine (Searle)		**Tablets:** 37.5 mg. diphenhydramine + 150 mg. aminophylline + 25 mg. racephedrine
Hydryllin (Searle)		**Tablets:** 25 mg. diphenhydramine + 100 mg. aminophylline; **Elixir:** 12.5 mg. diphenhydramine + 100 mg. aminophylline/4 cc.
Hydryllin with Racephedrine (Searle)		**Tablets:** 25 mg. diphenhydramine + 100 mg. aminophylline + 25 mg. racephedrine
Inhiston (Union)	Pheniramine maleate N.F.	**Tablets:** 10 mg.
Isamin-C (Arlington)		**Tablets:** 25 mg. pyrilamine maleate + 100 mg. ascorbic acid + 16 mg. caffeine
Isamin Syrup (Arlington)		**Syrup:** 15 mg. pyrilamine maleate/5 cc.
Methapyrilene HCl (Blue Line)	Methapyrilene HCl U.S.P.	**Tablets:** 50 mg.; **Elixir:** 6.76 mg./cc.
Minukol (Elder)		**Tablets:** 25 mg. pyrilamine maleate + 5 mg. *dl*-amphetamine phosphate
Multihist (Dorsey)		*Mixture* of equal wts. of pyrilamine maleate + pheniramine maleate + phenyltoloxamine dihyd. cit.; **Capsules:** 10 mg.; **Syrup:** 5 mg./5 cc.
Neo-Antergan Maleate (Sharp & Dohme)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.
Neohetramine (Nepera)	Thonzylamine HCl U.S.P.	**Tablets:** 25, 50 and 100 mg.; **Syrup:** 25 mg./4 cc.
Nethaprin (Merrell)		**Capsules:** 6 mg. Decapryn + 3/8 gr. nethamine + 1 gr. butaphylline (theophylline deriv.); **Syrup:** 6 mg. Decapryn + 3/8 gr. nethamine + 1 gr. butaphylline/5 cc.
Novahistine (Pitman-Moore)		**Tablets:** 12.5 mg. pheniramine maleate + 5 mg. phenylephrine HCl; **Elixir:** 12.5 mg. pheniramine maleate + 5 mg. phenylephrine HCl/5 cc.
Novahistine Fortis (Pitman-Moore)		**Capsules:** 12.5 mg. pheniramine HCl + 10 mg. phenylephrine HCl

For Additional Preparations Used, Please Turn to Page 490 ▶ ▶ ▶ ▶ ▶

Ready August 1955



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List of Currently Used Antihistaminic Preparations

Trade Name	Generic Name	Dosage Forms
Nuclon (S.K.F.)		**Capsules:** 37.5 mg. thenylpyramine fumarate + 1.25 mg. *d*-amphetamine + 2.5 mg. aspirin
Paraminyl Maleate (Buffington's)	Pyrilamine maleate U.S.P.	**Tablets:** 50 mg.
Perazil (Burroughs Wellcome)	Chlorcyclizine HCl U.S.P.	**Tablets:** 50 mg.
Phenergan (Wyeth)	Promethazine N.F.	**Tablets:** 12.5 mg.; **Syrup:** 6.25 mg./5 cc.
Pymadex (Testagar)		**Tablets:** 25 mg. pyrilamine maleate + 2 mg. *d*-amphetamine HCl; **Parenteral:** 25 mg. pyrilamine maleate + 2 mg. *d*-amphetamine HCl/cc.
Pyramal Maleate (Columbus)	Pyrilamine maleate U.S.P.	**Tablets:** 50 mg.
Pyra-Maleate (Vanpelt-Brown)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.
Pyribenzamine Citrate (Ciba)	Tripelennamine citrate N.N.R.	**Elixir:** 7.5 mg./cc.
Pyribenzamine-Ephedrine (Ciba)		**Tablets:** 25 mg. tripelennamine + 12 mg. ephedrine sulfate
Pyribenzamine HCl (Ciba)	Tripelennamine HCl U.S.P.	**Tablets:** 25 and 50 mg.; **D.A. Tablets:** 50 mg.; **Solution** (*nasal*): 0.5%; **Elixir:** 7.5 mg. citrate (5 mg. hydrochloride)/cc.; **Tablets:** 25 mg. + 12 mg. ephedrine sulf.; **Parenteral** (i.v. or i.m.): 1-cc. ampuls, 25 mg./cc.
Pyrilamine Maleate (Elder)	Pyrilamine maleate U.S.P.	**Tablets:** 25 mg.
Pyrilamine Maleate (Evron)	Pyrilamine maleate U.S.P.	**Tablets:** 25 mg.
Pyrilamine Maleate (Keith-Victor)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.
Pyrilamine Maleate (Raymer)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.; **Syrup:** 2.5 mg./cc.
Pyronil (Lilly)	Pyrrobutamine phosphate	**Tablets:** 15 mg.
Pyrrolazote (Upjohn)	Pyrathiazine HCl U.S.P.	**Tablets:** 25 and 50 mg., (laminated tablets) 50 mg.
Semikon HCl (Massengill)	Methapyrilene HCl U.S.P.	**Tablets:** 25, 50 and 100 mg.
Stangen Maleate (Physicians' Drug)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.
Statomin Maleate (Bowman Bros.)	Pyrilamine maleate U.S.P.	**Tablets:** 25 mg.
Synthenate Tartrate (Breon)	*p*-Methylaminoethanolphenol tartrate	**Parenteral** (i.v. or subcut.): 1-cc. ampuls, 100 mg./cc.
Tagathen (Lederle)	Chlorothen citrate U.S.P.	**Tablets:** 25 mg.
Teldrin Spansule (S.K.F.)	Chlorpheniramine maleate U.S.P.	**Capsules** (sustained release): 8 and 12 mg.
Thenfadil HCl (Winthrop-Stearns)	Thenyldiamine HCl U.S.P.	**Tablets:** 15 mg.; **Tablets-SA:** 30 mg.
Thenylene HCl (Abbott)	Methapyrilene HCl U.S.P.	**Tablets:** 25 and 50 mg.
Thenylene and Desoxyn (Abbott)		**Tablets:** 50 mg. methapyrilene HCl + 2.5 mg. methamphetamine HCl
Theohist (Massengill)		**Tablets:** 3/4 gr. methapyrilene HCl + 0.3 gr. ephedrine sulfate + 1 1/4 gr. theophylline
Thephorin (Hoffmann-La Roche)	Phenindamine tartrate U.S.P.	**Tablets:** 10 and 25 mg.; **Syrup:** 10 mg./4 cc.
Thoryza (Warren-Teed)		**Capsules:** 10 mg. thenylpyramine HCl + + 15 mg. Dover's powder
Thylogen Maleate (Rorer)	Pyrilamine maleate U.S.P.	**Tablets:** 25 and 50 mg.
Torantil (Winthrop-Stearns)		**Tablets** (ent. coated): 10 units histaminase in hog kidney ext.
Tri-Histin (Recsei)		*Mixture* of 40% chlorothenylpyramine cit. + 34% phenyltoloxamine dihyd. cit. + 26% thenylpyramine; **Tablets:** 25, 50 and 100 mg.; **Liquid:** 10 mg./4 cc.
Trimeton Maleate (Schering)	Pheniramine maleate N.F. (prophenpyridamine maleate)	**Tablets:** 25 mg.; **Elixir:** 7.5 mg./4 cc.
Triohistin (Ascher)		**Tablets:** 10 mg. methapyrilene HCl + 10 mg. pyrilamine maleate + 10 mg. phenyltoloxamine dihyd. cit.

MISCELLANEOUS PRODUCTS

Antihistamines + APC, AC, and C; also with narcotics
Antihistamines + steroids
Antihistamines + expectorant and cough mixtures
Antihistamines + topical preparations

In the offing . . .

More Stringent Regulations for Prescription Weights

Proposed changes in tolerances for prescription weights are apparently imminent. It is therefore advisable for pharmaceutical organizations to prepare for their enforcement. Current minimum standards and proposed changes are shown in the table.

As we pointed out in the July issue of THIS JOURNAL under Washington Views (p. 398), the 40th National Conference on Weights and Measures revised the minimum maintenance tolerances for prescription weights. Since this Conference is made up of Federal, state and local law enforcement officials dealing with weights and measures, it is to be expected that the more stringent recommendations adopted by the Conference will be reflected in regulations throughout the U.S.

It is incumbent, therefore, upon pharmacists everywhere to be familiar with the proposed changes and to take such steps as may be necessary to bring their equipment into line with the standards.

Table Appears on Page 501

The table below compares maintenance tolerances for prescription weights as published in the National Bureau of Standards Handbook H44 in 1949 and the revised standards. The new NBS handbook containing the revised standards becomes available August 1 (H44, 2nd edition, 1955) in loose-leaf and permanently bound forms.

While no effective date can be set locally for the new standards and presumably the NBS Handbook of Standards of 1949 will be in effect until notice is supplied by sealers of weights and measures to the contrary, it is well to anticipate any changes in the minimum standards. Inquiry should be made through state and local pharmaceutical associations as to whether the proposed standards will be adopted and, if so, when they are to become effective.

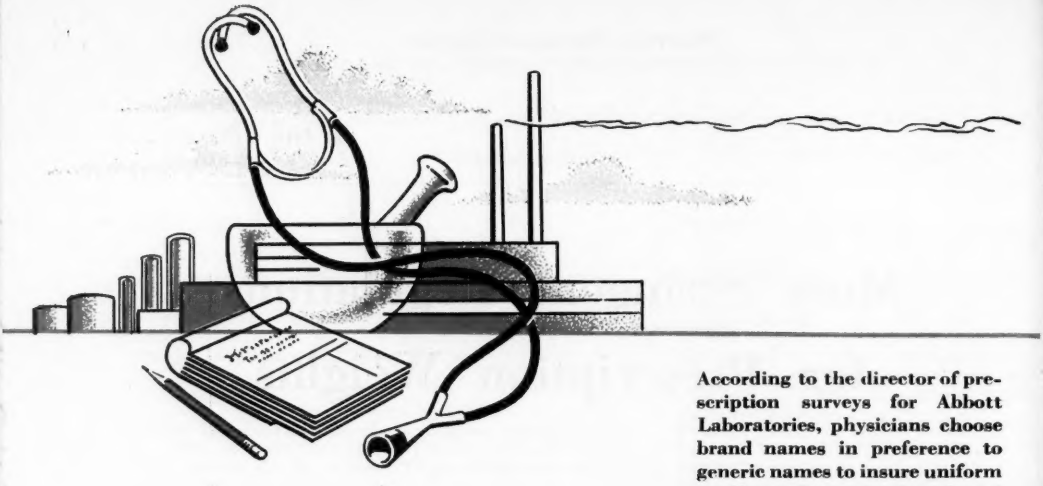
A.PH.A. in Accord

The Committee on Prescription Tolerances of the A.PH.A. Section on Practical Pharmacy considered the changes adopted at the National Conference, for which advance copies of the proposed table had been supplied. The Committee concluded that no logical objection could be offered to the proposed tolerances. This decision was reported to the Section at the Miami Beach meeting of May 4, 1955, and those in attendance concurred in the Committee's stand.

In view of the many coin-type weights that have been found to exceed the present permissible maintenance tolerances, it is probable that the trend toward cylindrical weights will be accelerated as a result of the more stringent standards.

Cylindrical weights kept in a proper container and handled with due professional care can be maintained within the proposed tolerance specifications for a reasonable period of time. However, where visits of weights and measures inspectors are few and far between, it behooves the

(Continued on page 507)



According to the director of prescription surveys for Abbott Laboratories, physicians choose brand names in preference to generic names to insure uniform quality and to meet Americans' preference for brand buying.

Physicians Prefer Brand Names

By David D. Stiles

ABOUT a generation ago when the percentage of prescriptions for specialties began to exceed those for official preparations, many leaders in pharmacy expressed the fear that professionalism and profitability in pharmacy was threatened. Campaigns were organized to urge the physician to prescribe official preparations singly or compounded. Pharmacists sincerely believed that they were working for the preservation of their profession. Time has proved that their apprehension was unwarranted.

Trends in Specialty Prescriptions

Let us see what the prescription market would be today if the campaign against pharmaceutical specialties had succeeded. Would we now have some of the very profitable items which save and prolong life if the incentive for pharmaceutical research had been removed or reduced? Would prescriptions have increased from 176 million in 1940 to over 400 million in 1953—an increase of 225 per cent, although the population increased only 25 per cent? Would the average price have risen from 94 cents to $2.15, and at the same time afforded greater economic value to the patient? And if the number of compounded prescriptions had risen instead of fallen, would we now have enough pharmacists to fill them? The answers are obvious.

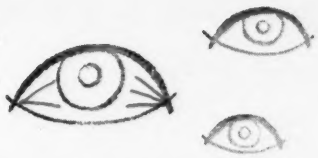
What actually happened in the last 20 years? Rates in prescribing specialties advanced more rapidly than in any preceding period, until today, in nearly all the 21 areas covered by prescription surveys, the percentage of prescriptions for one or more specialties now runs consistently 75 to 80 per cent. Also prescriptions not requiring compounding run from 83 to 88 per cent in the East and from 90 to 96 per cent in the West.

There are probably many reasons for this trend. I suggest that the American public is quite brand-opinionated. All of us seem to select brands of shaving cream, tooth paste, razor blades and cigarettes in which we have confidence because of their controlled uniform quality. We demand certain brands.

This preference for brands is not inherent. It is the result of education, observation and experience. It has increased as our illiteracy has declined. Use of brands is intensified when one has the responsibility of buying for someone else. For example, a mother gives greater thought to selecting a physician to whom she entrusts the life of her child than one she might choose for herself. She is equally particular about the brand of food, and even clothing that she purchases for her child. Likewise, a member of the health profession may feel obligated to designate precise medication (even naming its manufacturer) which is to be dispensed to those who place their lives in his hands. Whether this be the reason or not, it is certain that in the vast majority of cases the physician prefers to identify the

(Continued on page 507)

Diphenhydramine Hydrochloride



ANTIHISTAMINE EYE DROPS

Different formulations incorporating diphenhydramine hydrochloride in solutions for ophthalmic use were prepared and tested by R. W. Lowe, pharmacist at the University of Michigan Health Service, and Professor Worrell of the University's College of Pharmacy. It was found necessary to buffer the solution properly in order to overcome the irritating effect of the original formula.

By **Reginald W. Lowe** *and* **Lee F. Worrell**

ANTIHISTAMINIC compounds have been evaluated as eye drops since 1948. Although not effective in all allergic conditions involving the eye, the usage is nevertheless of wide enough scope to hold considerable interest (1–7).

In July, 1953, the Allergy Department of the University of Michigan Health Service requested that the Health Service pharmacy attempt to develop a more suitable formula than the 0.25% diphenhydramine HCl compound solution then being used as an eye drop. Up to that time the formula, obtained from another department of this institution, had been used and found to be unsatisfactory. Experience had demonstrated the drops were quite irritating to the patient's eyes. The Allergy Department felt that unless a definite improvement could be made in the formula it would be necessary to discontinue the use of the solution.

Four solutions, including the formula previously used, all representing the same concentration of diphenhydramine HCl, were prepared and the *p*H checked by means of a Beckman Model G *p*H Meter in July, 1953, and again in July, 1954, after one year of shelf testing.

The major concern in this study was chemical stability and sterility was not considered. No antibacterial agent was added and special aseptic compounding technique was not used. In solution 4, the diphenhydramine HCl was dissolved in sufficient sterile distilled water to make 20 cc., and sufficient diluting solution (prepared in each case with sterile distilled water) was then added to make 90 cc. The solutions were filtered through fine filter paper until clear.

Solution No. 1:

Diphenhydramine HCl (10 mg./cc.[a])	50.0 cc.
Boric acid	4.0 Gm.
Sodium hydroxide solution 0.1 *N*	100.0 cc.
Distilled water *q.s.*	200.0 cc.

[a] Parke, Davis & Company, Steri-vial Benadryl HCl

*p*H 7.80, July, 1953
*p*H 7.88, July, 1954

Solution No. 2:

Diphenhydramine HCl	0.225 Gm.
Distilled water *q.s.*	90.000 cc.

*p*H 6.40, July, 1953
*p*H 7.77, July, 1954

Solution No. 3:

Diphenhydramine HCl	0.225 Gm.
Sterile normal saline *q.s.*	90 000 cc.

*p*H 6.75, July, 1953
*p*H 7.62, July, 1954

Solution No. 4:

Diphenhydramine HCl	0.225 Gm.
Distilled water *q.s.*	20.000 cc.
Diluting solution[a] *q.s.*	90.000 cc.

[a] White and Vincent Diluting Solution (8) (Buffered and Isotonic):

Potassium phosphate monobasic	0.428 Gm.
Sodium phosphate anhydrous	0.572 Gm.
Sodium chloride	0.437 Gm.
Distilled water *q.s.*	100.000 cc.

*p*H 6.75, July, 1953
*p*H 6.88, July, 1954

(Continued on page 503)

Is Detailing by Non-Pharmacists

An Unlicensed Traffic in Drugs and Medicines?

One phase of pharmaceutical activity that has been the subject of recent letters in the April and June issues of This Journal —detailing—is discussed by a detail man who believes detailing should be a licensed phase of pharmaceutical practice.

By Thomas A. Moskey, Jr., B.S. in Pharm.

THE PRACTICE OF PHARMACY, like other professions, has changed much in scope and character since its origin and, because alive and virile, must keep abreast of medical progress. Pharmacy has been forced into an era of specialization inasmuch as general knowledge and techniques have increased to the point where no individual is capable of being all-informed and all-skilled in all phases.

Recently, one duty of the dispensing pharmacist has been taken over largely by the manufacturing pharmacist. This reversal in compounding came about automatically in the interests of standardization, control, purity and availability. However, with present trends in prescription writing habits of physicians, dentists and veterinarians, the dispensing pharmacist—whether retail, hospital or military—is no less morally obligated to the public nor less obligated by law to perform skills now required of him. Although less frequently called upon to compound today he must receive, store, safeguard and distribute drugs and medicines and have an all-inclusive knowledge of manufactured products dispensed by him as to dosage, directions for use, incompatibilities, etc., plus knowledge and ability to compound them when occasion arises.

To practice pharmacy in any specialty the individual concerned must be duly qualified and licensed by law. However, when pharmaceutical skills and actions are performed by manufacturers' representatives, the individual, although gainfully employed and acting at his own discretion in a capacity affecting the public welfare, is not at present required to be trained, experienced and responsible to any licensing authority whatsoever.

Detailing Imposes Obligations to Public

It is common knowledge that detailing, as now accomplished, involves receiving, storing, safeguarding, distributing and individual handling of sample-size and original trade-size packages of drugs and medicines and descriptive literature. The bulk of the medicaments concerned are intended for, can be, and actually are used by man, and are so considered by the Food and Drug Administration.

Some drugs and medicines, while in the detail phase under custody of detail men, require special storage such as refrigeration, or protection from freezing or excesses of moisture, dryness or light. Many dated items age prematurely, decompose or are physiologically altered when subjected to extremes of temperature such as are found in the luggage compartment of automobiles or on

porches or in garages. The possibility of contamination, adulteration or mislabeling of drugs and medicines when co-mingled and in open storage is ever present even under ideal storage facilities. The proper handling of both internal and external medications and particularly of new products where past experience is lacking requires professional knowledge of drug products in general and involves great responsibility.

Prime Practice

Safeguarding drugs and medicines has always been and will continue a prime practice of pharmacy. Detailing encompasses the handling of drugs such as hormones, antihistamines, antibiotics, sulfonamides, preparations containing alkaloidal and glucosidal extracts, potent chemical synthetics and substances referred to as red-flag drugs in FDA terminology, such as barbiturates, amphetamines and general anesthetics. These potentially habit-forming and harmful therapeutic agents are required to be appropriately secured, safeguarded and protected from the unauthorized public, from addicts and minors by, at present, unlicensed individuals.

The fate of drugs and medicines sold directly to the medical, dental or veterinary practitioner or pharmacist and delivered by the representative is obvious. What practitioners do with medicaments left in their care without cost to them is generally known. Many of these items are given to patients for consumption or are administered by the practitioner. Some drugs and medicines are presented to a favorite pharmacist who in turn usually adds them to shelf stocks for sale where applicable. Frequently these items are given to charitable institutions, hospitals or dispensaries. Occasionally the medicaments are sold to collectors who pay the practitioner and in turn regroup or repackage them if necessary, and through illegitimate channels they are siphoned into the drug trade for eventual public consumption. I have never known or heard of practitioners who destroyed all drugs and medicines given them by detail men. Destruction, incidentally, does not include discarding in the waste basket because trash disposal has its own intricate system of distribution.

These conditions are known to exist and improvements are needed but they must be considered from a practical viewpoint. Detailing is a vital part of the drug industry. In general it serves a good purpose and gives employment to many persons.

However, detailing need not be equivalent to practicing pharmacy. Only where detailing consists of receiving, storing, safeguarding and distributing, by means of individual handling, of legally restricted product information and of drugs and medicines intended for use by man, is detailing practicing pharmacy. Selling, order taking, representing, promoting, displaying, demonstrating, etc., are actions which require no professional background.

Many non-pharmacists and non-licensed pharmacists now engaged in detailing are exceptional people. They are just as productive as their licensed pharmacist co-workers and some are more so, and they have been employed in good faith and depend upon their jobs for their livelihood. There is hardly a manufacturer who cannot adjust his procedures so that presently employed non-pharmacists could legally qualify to detail since detailing and practicing detail pharmacy can easily be separated. The non-licensed pharmacists need only become registered by the state board in whose geographical area they are employed.

Salient Questions

To pharmacists who are responsible and who pay the bills, the following questions are posed:

Is it not your obligation to the public to provide the best that pharmacy has to offer?

Whom do you really want to represent you and your profession in the office of the physician, dentist and veterinarian—licensed, responsible and qualified people of your own kind or laymen?

Why does the practitioner prefer to do business with a professionally trained representative?

Why do manufacturers prefer pharmacists if they are available? There is one common factor in all these questions. Pharmacy can best be practiced by pharmacists.

The FDA is naturally aware of this traffic in drugs, medicines and devices intended for use by man and in their opinion it would definitely be in the best interests of the public if it were performed by persons responsible to a licensing authority in some manner. Although the situation has given them no great concern, it could be substantially improved if some laws more rigidly controlling this traffic were enacted.

There are, unfortunately, so-called unethical practices in pharmacy as well as in other professions. It is the duty of every profession to protect the public from hazards. It is the responsibility of pharmacy to assure that drugs and medicines are manufactured and controlled properly. This extends to preventing medica-

(Continued on page 503)

Ionic Incompatibilities of

SUSPENDING AGENTS

Many common suspending agents are ionic in nature—usually anionic. Ionic reactions may be useful in controlling taste problems, but they can also lead to inactivation of therapeutic agents. In testing 18 suspending agents, Professor Miller and Joseph Nakashima of the University of Southern California found that bentonite and Veegum precipitated a variety of cationic agents.

By Joseph Y. Nakashima *and* Orville H. Miller

PHARMACEUTICAL SUSPENDING AGENTS are often used for other purposes: protective colloids, emulsifiers, thickening or bodying agents, stabilizers, granulating agents in tablet manufacture, film formers, etc. They are often found in lotions, miscellaneous solutions, ointments, suppositories, emulsions, tablets, and other dosage forms as well as in suspensions. This important class of pharmaceuticals is used primarily to impart viscosity to aqueous preparations and could perhaps be more properly identified as "viscosifiers."

A series of recent papers (1, 2, 3, 4, 5, 6, 7), have discussed the selection of suspending agents from the standpoint of their physical and chemical properties and the stability of suspensions of various insoluble materials. Incompatibilities of these substances with alcohol, metallic ions and tannins have been noted, but little or no attention has been given to their ionic nature, which may lead to incompatibilities with many organic therapeutic agents of opposite ionic type.

These incompatibilities contribute to compounding difficulties and in certain instances result in complete inactivation of the therapeutic agents. Such incompatibilities may be easily overlooked, especially in opaque vehicles when a considerable excess of suspending agent is present and aids in the dispersion and suspension of the precipitate.

Many of the common suspending agents are anionic in nature, that is, they consist in whole or in part of complex acids and their salts. This is clearly demonstrated in a recent study of identification tests for stabilizing agents in which precipitation reactions with a cationic soap (alkyl dimethylbenzyl ammonium chloride) occurred with most of the substances tested (8). Several suspending agents are essentially nonionic in character and one is cationic.

To demonstrate the occurrence of ionic incompatibilities and to indicate the relative susceptibility to them, a number of suspending agents were combined with a variety of cationic organic pharmaceuticals and any immediate precipitation noted. A strong acid and a divalent and trivalent metallic ion were also included in the study since these may also be common causes of incompatibility. In addition, two anionic substances, sodium fluorescein and amaranth, were tested in a similar fashion to show their freedom from incompatibilities with the anionic suspending agents. The results appear in the table.

Evidence of Incompatibility

Only immediate precipitation or coagulation was recorded. It is quite possible that additional incompatibilities would develop on standing. In a number of instances precipitation occurred only when certain proportions were used. From the data in the table it can be seen that certain of the suspending agents are more prone to ionic incompatibilities than the others, particularly sodium alginate, Kraystay, Gelloid–50, bentonite, and Veegum. Of these bentonite and Veegum appeared to completely precipitate all of the organic cations with which they were combined. This is of course only true when a chemical excess of the suspending agent is present. Such complete precipitation could lead to inactivation of the organic cations involved.

Several additional experiments were performed to evaluate this possibility. An *E. coli* inoculum

(Continued on page 506)

Revised List of Accredited Colleges of Pharmacy

The American Council on Pharmaceutical Education, which is the accrediting agency for colleges of pharmacy in the United States, has issued its revised list of accredited institutes as of July 1, 1955. The list of 74 colleges includes 69 designated as Class A; 2 designated as Class B; 3 designated as Class C. Their significance, as announced by the Council is as follows:

Classifications

Class A—Those colleges which have no significant deficiencies.

Class B—Those colleges which have deficiencies that normally can be corrected promptly by administrative action.

Class C—Those colleges which have deficiencies that will take considerable time and effort to correct. A college in this class will be given a reasonable period to be determined by the Council in which to correct its deficiencies or show cause why it should not be dropped from the list of accredited colleges.

	Classification
ALABAMA	
Alabama Polytechnic Institute, Auburn	A
Howard College, Birmingham	A
ARIZONA	
University of Arizona, Tucson	A
ARKANSAS	
University of Arkansas, Little Rock	A
CALIFORNIA	
University of California, San Francisco	A
University of Southern California, Los Angeles	A
COLORADO	
University of Colorado, Boulder	A
CONNECTICUT	
University of Connecticut, Storrs	A
DISTRICT OF COLUMBIA	
George Washington University, Washington	A
Howard University, Washington	A
FLORIDA	
University of Florida, Gainesville	A
GEORGIA	
Southern College of Pharmacy, Atlanta	C
University of Georgia, Athens	A
IDAHO	
Idaho State College, Pocatello	A
ILLINOIS	
University of Illinois, Chicago	A
INDIANA	
Butler University, Indianapolis	A
Purdue University, Lafayette	A
IOWA	
Drake University, Des Moines	A
State University of Iowa, Iowa City	A
KANSAS	
University of Kansas, Lawrence	A
KENTUCKY	
University of Kentucky, Louisville	A
LOUISIANA	
Loyola University, New Orleans	A
Xavier University, New Orleans	A
MARYLAND	
University of Maryland, Baltimore	A
MASSACHUSETTS	
Massachusetts College of Pharmacy, Boston	A
New England College of Pharmacy, Boston	C
MICHIGAN	
Detroit Institute of Technology, Detroit	B
Ferris Institute, Big Rapids	A
University of Michigan, Ann Arbor	A
Wayne University, Detroit	A
MINNESOTA	
University of Minnesota, Minneapolis	A
MISSISSIPPI	
University of Mississippi, University	A
MISSOURI	
St. Louis College of Pharmacy and Allied Sciences, St. Louis	A
University of Kansas City, Kansas City	A
MONTANA	
Montana State University, Missoula	A
NEBRASKA	
Creighton University, Omaha	A
University of Nebraska, Lincoln	A
NEW JERSEY	
Rutgers University, Newark	A
NEW MEXICO	
University of New Mexico, Albuquerque	A
NEW YORK	
Columbia University, New York	A
Fordham University, New York	A
Long Island University Brooklyn College of Pharmacy, Brooklyn	A
St. John's University, Brooklyn	A
Union University, Albany	A
University of Buffalo, Buffalo	A
NORTH CAROLINA	
University of North Carolina, Chapel Hill	A
NORTH DAKOTA	
North Dakota Agricultural College, Fargo	A
OHIO	
Ohio Northern University, Ada	C
Ohio State University, Columbus	A
University of Cincinnati, Cincinnati	A
University of Toledo, Toledo	A
OKLAHOMA	
Southwestern State College, Weatherford	A
University of Oklahoma, Norman	A
OREGON	
Oregon State College, Corvallis	A
PENNSYLVANIA	
Duquesne University, Pittsburgh	A
Philadelphia College of Pharmacy and Science, Philadelphia	A
Temple University, Philadelphia	A
University of Pittsburgh, Pittsburgh	A
PUERTO RICO	
University of Puerto Rico, Rio Piedras, P. R.	A
RHODE ISLAND	
Rhode Island College of Pharmacy and Allied Sciences, Providence	B
SOUTH CAROLINA	
Medical College of South Carolina, Charleston	A
University of South Carolina, Columbia	A
SOUTH DAKOTA	
South Dakota State College of Agriculture and Mechanic Arts, Brookings	A
TENNESSEE	
University of Tennessee, Memphis	A
TEXAS	
Texas Southern University, Houston	A
University of Houston, Houston	A
University of Texas, Austin	A
UTAH	
University of Utah, Salt Lake City	A
VIRGINIA	
Medical College of Virginia, Richmond	A
WASHINGTON	
State College of Washington, Pullman	A
University of Washington, Seattle	A
WEST VIRGINIA	
West Virginia University, Morgantown	A
WISCONSIN	
University of Wisconsin, Madison	A
WYOMING	
University of Wyoming, Laramie	A

Salute ★★

General Armstrong Awarded Honorary A.PH.A. Membership

At the celebration of the eighth birthday of the Medical Service Corps, which occurred at the Officers' Club on the grounds of the Walter Reed

General George Ellis Armstrong

Army Medical Center in Washington, D.C., Saturday, July 30, John B. Heinz of the AMERICAN PHARMACEUTICAL ASSOCIATION presented retiring General Armstrong of the U.S. Army with a certificate of honorary membership.

The honorary membership was voted by the Council of the A.PH.A. on April 30 of this year and the certificate bears the following citation:

American Pharmaceutical Association

George Ellis Armstrong

Major General, M.C., United States Army

Surgeon General of the United States Army; able administrator; eminent leader in the development of the highest quality of medical service ever attained for the Armed Forces, persuasive exponent of the integration of the allied health professions through the Medical Service Corps, the AMERICAN PHARMACEUTICAL ASSOCIATION takes pleasure in conferring upon you

Honorary Membership

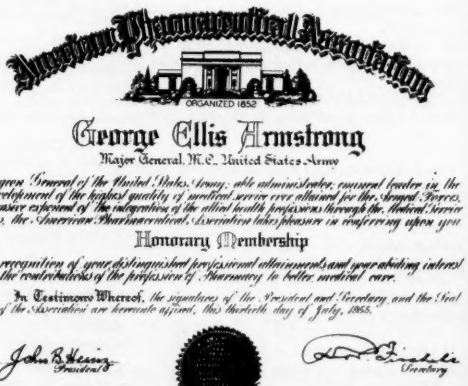
In recognition of your distinguished professional attainments and your abiding interest in the contributions of the profession of Pharmacy to better medical care.

It is the first time a Surgeon General of the Army received such an honor and it is also the first honorary membership awarded by the ASSOCIATION since 1943.

In acknowledging the certificate from President Heinz, General Armstrong spoke feelingly about his relations with the pharmacists of the United States and commended their broad-mindedness in acquiescing to the consolidation of the Pharmacy Corps with the Medical Service Corps of the Army, and of the splendid cooperation which this Corps and the Medical Corps had received from the A.PH.A. throughout his term of office.

Some 300 persons joined the celebration of the eighth birthday of the M.S.C. The occasion was presided over by Col. Bernard Aabel, chief of the Corps, and included the unveiling of the portraits of Colonels Othmar Goriup and Robert Black, the first and second chiefs of the Corps. These portraits will hang with those of the past surgeons general of the Army at Walter Reed Army Medical Center.

In addition to President Heinz, the AMERICAN PHARMACEUTICAL ASSOCIATION was represented by Council Chairman R. Q. Richards, House of Delegates Chairman J. J. Lynch, and Secretary Robert P. Fischelis. The latter introduced President Heinz and extended congratulations to the M.S.C. from the A.PH.A.


American Pharmaceutical Association

ORGANIZED 1852

George Ellis Armstrong

Major General, M.C., United States Army

Surgeon General of the United States Army; able administrator; eminent leader in the development of the highest quality of medical service ever attained for the Armed Forces, persuasive exponent of the integration of the allied health professions through the Medical Service Corps, the American Pharmaceutical Association takes pleasure in conferring upon you

Honorary Membership

In recognition of your distinguished professional attainments and your abiding interest in the contributions of the profession of Pharmacy to better medical care.

In Testimony Whereof, the signatures of the President and Secretary and the Seal of the Association are hereunto affixed, this fourth day of July, 1955.

John B. Heinz
President

Robert P. Fischelis
Secretary

Facsimile of Membership Certificate

International Pharmaceutical Federation to Meet in London September 18–23

The biennial meeting of the General Assembly of the Fédération Internationale Pharmaceutique, which is the 16th of such meetings, will be held in London, England, under the auspices of The Pharmaceutical Society of Great Britain, from September 18 to 23, at the University of London.

The (condensed) program follows:

Sunday, September 18

10:00 a.m.–8:00 p.m. Registration
10:00 a.m., 2:30 p.m. F.I.P. Council Meetings

Monday, September 19

9:30 a.m. Opening of General Assembly, with Presidential Address
11:15 a.m. Science paper
2:30 p.m. Professional paper
3:15 p.m. General Assembly (Business session)
7:30 p.m. Reception

Tuesday, September 20

9:30 a.m. Science symposium
9:30 a.m., 2:30 p.m. Section Meetings
6:00 p.m. Meeting of l'Union Mondiale de l'Histoire de la Pharmacie

Wednesday, September 21

9:30 a.m. Science symposium
9:30 a.m. Section Meetings
2:30 p.m. Science symposium
2:30 p.m. Section Meetings
4:30 p.m. F.I.P. Council Meeting
7:00 p.m. Ballet, Festival Hall

Thursday, September 22

9:30 a.m. Science symposium
9:30 a.m. Meetings of Sections
2:00 p.m. Excursion

Friday, September 23

9:30 a.m. General Assembly
4:30 p.m. Close of General Assembly
6:30 p.m.–1:00 a.m. Banquet and Dance

Meetings will be arranged also for the directors of control laboratories, hospital pharmacists, military pharmacists, editors of pharmaceutical periodicals, secretaries of pharmacopeial commissions, pharmacognosists, and for the Union Mondiale de l'Histoire de la Pharmacie.

The opening and closing sessions of the General Assembly and the science symposia will be held in Friends House, Euston Road, London N.W. 1, where a simultaneous translation service will be provided in English, French and German. The meetings of the Sections will be held at the Assembly headquarters, Senate House, University of London, Russell Square, W.C. 1. The two buildings are about 400 yards apart.

Scientific Meeting

The University Section which is organizing the general science sessions has decided that the four meetings shall take the form of symposia, each consisting of a discussion on recent advances in the subjects which have been selected. Invited speakers will read papers on these subjects and a general discussion on them will follow.

Subjects to be discussed are:

1. The Pharmacy of Blood, Blood Products and Blood Substitutes:
   a. Blood clotting mechanisms.
   b. Blood products.
   c. Particle size of plasma substitutes.
2. Recent Advances in Pharmaceutical Analysis:
   a. Infra-red spectroscopy.
   b. Recent advances in chromatography.
   c. Electrometric titrations.
3. Ion Exchange:
   a. Clinical applications.
   b. Analytical applications.
   c. Other technical applications.
4. Tests for the Sterility of Pharmaceutical Preparations:
   a. Statistics of the design and interpretation of tests.
   b. Choice of media.
   c. Antagonists and inactivators.

Information regarding the details of the meeting can be obtained from D. W. Hudson, chairman of the London Organizing Committee, 17 Bloomsbury Square, London, W.C. 1.

Typical Days

FROM THE SECRETARY'S DIARY FOR JULY, 1955

5th The big holiday weekend over and the vacation season with its problems of filling in for absentees continuously before us for the next two months. Congress still in session and going strong in its effort to finish important business by the end of July. Much speculation as to what will happen to polio vaccine distribution and many other health bills subject to compromise between the two Houses of Congress.

8th Today a meeting of the Committee on Public Relations with all members in attendance, led by the genial and hard-working chairman, J. Warren Lansdowne. Pharmacy Week activities were found to be well in hand, and the program moving according to schedule, with Committee Secretary Charles Rabe keeping a careful eye on all the details. Members of the committee include George Archambault, John A. Lynch, and George Bender, who is a newcomer replacing Walter Chase.

12th Conferring with Colonel Aabel and others in the office of the Army Surgeon General on plans for further utilization of pharmacists in their professional capacities. Also much telephone conversation on congressional plans for the purchase of property to the rear of our building so as to keep it available for governmental use in beautifying the area contiguous to the Lincoln Memorial and the new building planned for the Department of State.

14th Today conferring with officers of the Bureau of the Budget and representatives of the Public Health Service with regard to record keeping when Salk vaccine becomes sufficiently plentiful to find its way into commercial channels.

18th Now sending greetings to state conventions which have selected July dates for their annual meetings. Also conferring with representatives of the National Capital Planning Commission, the Fine Arts Commission, and others about plans for the area in which our building is located and which will have a direct bearing on necessary expansion of our present quarters. Also confronted with the prospect of a bridge across the Potomac at the foot of Constitution Avenue, which may seriously alter the character of surrounding territory.

20th This day before the Senate Committee on Appropriations, supplying information on future plans of the ASSOCIATION with regard to expansion, in the light of commitments made at the time our present building was erected.

26th Most of the past week working on details connected with distribution of the National Formulary X soon to be available. Also a series of conferences with ASSOCIATION officers, attorneys, architects and others concerned with the plans of the Federal government for building in this area. This afternoon a visit from George Beal with opportunity provided to review the building program now under consideration by the Federal government for this area and to look over our library and archives section now taking on substantial form.

28th Much telephoning in connection with the forthcoming meeting of the Executive Committee of the Council of the A.PH.A. called into special session to confer on many problems requiring interim attention. Chairman Richards of the Council was first to arrive for tomorrow's meeting, and this evening spent with him discussing tomorrow's agenda.

29th All day with Executive Committee of the Council at the Statler Hotel, attended by Chairman Richards, President Heinz, House of Delegates Chairman Lynch, Dr. H. A. B. Dunning and Architect Richard Eggers. Treasurer Schaefer, who is vacationing in Mexico and could not be reached in time for notice of the meeting, was the only absentee. The Committee reviewed expected allotment of space for an addition to the present structure to relieve present congestion. Late news from the Capitol indicates, however, that Senate and House conferees have decided no appropriation will be made to purchase property at the rear of our building at this time.

30th All day at Headquarters with the members of the Executive Committee of the Council completing plans for district meetings, committee appointments and general activities of the ASSOCIATION for the coming fall and winter. Also reviewing in detail the International Pharmaceutical Federation program scheduled for London in September, and in the evening to the Officers' Club at Walter Reed Hospital to honor General Armstrong at the eighth birthday party of the Medical Service Corps with President Heinz awarding the ASSOCIATION'S first honorary membership since 1943 to the General for his outstanding services to American pharmacy during his term as Surgeon General of the Army.

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Bulk unit of 5000	53.33	80.00

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WARNER-CHILCOTT

Preventing Accidental Poisoning

Guest editorial appearing in the Journal of the American Medical Association for August 13, 1955.

By Irvin Kerlan, M.D.

Associate Medical Director, Food and Drug Administration

In 1951 accidental poisoning by solid and liquid substances caused 1,497 deaths, of which 411 were in children under 5 years of age. These statistics do not reveal the full picture. They do not point out the staggering number of nonfatal poisonings, which is estimated to be 100 to 150 times the number of fatalities. The public must be awakened to the hazards of misuse of drugs and other household chemicals in a continuing effort to prevent accidents in the home. Poisonings by common household items such as bleaches; cleaning fluid; furniture polish; lye; kerosene; rat and insect poisons; weed killers; medicines including aspirin, methyl salicylate, and boric acid; and cosmetics and toilet goods are particularly tragic since they are preventable. Too often parents have permitted accidental poisoning of their children through carelessness or lack of information. With thought, instruction, and effort they can reduce poisoning risks.

Wider community participation in accident prevention programs can be readily achieved. There is a broad range of possibilities for telling the child-safety story. Especially responsive to furthering the poisoning prevention activities would be youth groups, parent-teacher organizations, women's clubs, and home economists. Among the young people's groups should be mentioned the Boy Scouts, Girl Scouts, Campfire Girls, 4-H Club, and church groups. National health groups are already actively concerned with reducing the accidental poisoning hazards; they include the Red Cross, National Safety Council, medical societies, health departments, and large insurance companies. The Food and Drug Administration through its responsibilities under the Federal Food, Drug, and Cosmetic Act and the Caustic Poisons Law has been close to the problem and has participated in its correction through legal and educational means.

The number of interested groups can be extended to provide protection through community participation in continued accident prevention programs. Local and national public educational mediums such as newspapers, radio, television, films, public speeches, displays, posters, and readily available information in pamphlets, booklets, and leaflets should be employed recurrently to tell this safety story. Each community should develop its own program, depending on local resources.

The number of potentially toxic substances in the home that may be accidentally swallowed is huge and is increasing daily. Recent advances in the production of new chemicals and their ready availability in the home through advanced manufacturing processes, advertising, and marketing increase the need to keep abreast of these new developments, their potentiality for poisoning, and adequate treatment in case of misuse or accidental ingestion. The physician needs much background to be kept informed of the toxic chemicals contained in all of the chemical agents found around the home and the most effective treatment when a mishap may result in poisoning. These needs have led to formation of a Committee on Toxicology by the American Medical Association and development of poisoning control centers.

The American Medical Association through its recently formed Committee on Toxicology is devoting special attention to correcting the accidental misuse of chemical products found in and around the home. The Committee has advanced a five point program to (1) encourage informative labeling and safe packaging, (2) stimulate laboratory and clinical research for antidotes, (3) standardize technical nomenclature, (4) develop criteria for evaluating hazardous substances, and (5) sponsor a substained educational program. The results of these studies are periodically reported to the profession in *The Journal* and other publications that are concerned with health matters. Poisoning control centers have been formed under the sponsorship of local health departments and pediatric societies. Through these centers much already has been learned about the types of substances that are accidentally ingested. Moreover, opportunity has been provided through follow-up home visits to acquaint parents with home safety hints.

Antihistamine Eye Drops

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Discussion

Solution No. 1—At *p*H 7.80 this original formula was found to be very irritating to the eyes. Since the buffering action of the solution prevented the *p*H from changing but slightly, the solution still remained unsuitable for use as an ophthalmic solution.

Solution No. 2—At the initial *p*H this formula was well tolerated by the eyes, but after standing for one year the solution became as much an irritant to the eyes as the original formula.

Solution No. 3—Similar in action to that of of Solution No. 2 when freshly prepared, this also proved irritating to the eyes on aging. The original *p*H was somewhat higher than that of Solution No. 2. This may be due to common ion effect of the chloride ion.

Solution No. 4—This formula using the White and Vincent Diluting Solution was well tolerated by the eyes, whether freshly prepared or after the long period of standing. The extent to which the solution had been buffered prohibited any significant change in *p*H after a period of one year.

Summary and Conclusion

On standing, solutions 2 and 3, both unbuffered, showed a considerable increase in the *p*H, which seems to be followed by a marked increase in the irritating qualities as eye drops. Solutions 1 and 4, being buffered and isotonic, stand up well chemically for a one-year period without any significant change in *p*H or in respective irritating qualities. Of the two, No. 1 is considerably more irritating to the eye, both when fresh and after a period of standing.

If diphenhydramine HCl eye drops are to be stored or used over a period of time there is a definite need for the drops to be buffered in addition to being isotonic. From the patient's standpoint, the solution is less irritating to the eyes and the tears seem better able to adjust to the slightly acid formula No. 4, rather than to the basic qualities of the other formulas.

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Detailing by Non-Pharmacists

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ments not in good condition from reaching the public. The detail man who knowingly solicits the sale or free distribution of medicaments of questionable potency is willfully jeopardizing the public welfare. Only by licensing of qualified, responsible people for this work can pharmacy minimize the dangers and maximize the benefits of detailing.

Summary

It is believed the following practices, constituting so-called detailing, which affect the general public utilize highly specialized skills and actions requiring knowledge, experience, responsibility and trust and when performed together do constitute the practice of pharmacy:

(1) Receiving drugs and medicines, properly labeled, in good condition from unquestionable and reliable sources.

(2) Storing drugs and medicines in accordance with acknowledged and labeled requirements protected from extremes of temperature, moisture, light and age.

(3) Safeguarding drugs and medicines from minors, addicts and unauthorized persons, and their protection from intentional and accidental adulteration, contamination and mislabeling.

(4) Distributing drugs and medicines into authorized channels and dissemination of all-inclusive product information including dosage and directions for use of substances restricted to sale or distribution only on prescription.

In the best interests of the uninformed consumer and the health and welfare of the general public it is believed these practices should be recognized for what they actually are, namely, "detail pharmacy."

It is believed that whereas detailing consists of receiving, storing, safeguarding and distributing, with individual handling, of drugs and medicines and legally restricted product information intended for use by man, performed by individuals gainfully employed and acting at their own discretion, it should be practiced only by responsible, trained persons, duly qualified and licensed by law.

YOUR PHARMACIST WORKS FOR
BETTER COMMUNITY HEALTH
NATIONAL PHARMACY WEEK
OCTOBER 2–8, 1955

By George Griffenhagen

Free Museum Catalog

We have recently received the following communication from J. Cusi, director general of the Laboratorios del Norte de España in Masnou, Barcelona, Spain:

> "We have seen your *Collector's Corner* in the *Practical Pharmacy Edition*, and we have been glad to write to the various people mentioned in the December 1954 issue, sending them a copy of our publication *Museo Retrospectivo de Farmacia y Medicina*.
>
> "Should you think that our publication would be of interest to collectors, we will be glad to send it to persons you mention or who apply to us. Of course we would like to receive, in exchange, any brochure or book published by them dealing with the history of pharmacy and related sciences."

The catalog entitled *Museo Retrospectivo de Farmacia y Medicina* which is offered to readers of *Collector's Corner* is paper bound, consists of 72 pages and includes 159 photographs of the pharmaceutical collections in the Laboratorios del Norte de España Museum of Pharmacy. The publication is printed in Spanish, but the photographs are provided with English captions. The Museum is centered around a pharmacy restoration in the Benedictine Monastery of Santa María la Real of Nájera (early 18th century).

Old-Time Post Cards

Dr. Ralph D. Bienfang, professor of pharmacy at the University of Oklahoma, collects old-time penny post cards which were once the stock-in-trade of pharmacies. Dr. Bienfang has been collecting picture postcards for some years now, and has a collection of over one thousand. His earliest are an Indian series dated 1899 carrying colorful portraits of Indian chiefs. There are cards for all the holidays, sports and presidents' portraits. Dr. Bienfang is requesting pharmacists across the nation to send him their "put-aside" penny post card stocks 40–50 years old and older.

Restoration of Pharmacy of Santa María la Real in Nájera (*courtesy*, Laboratorios del Norte de Espana)

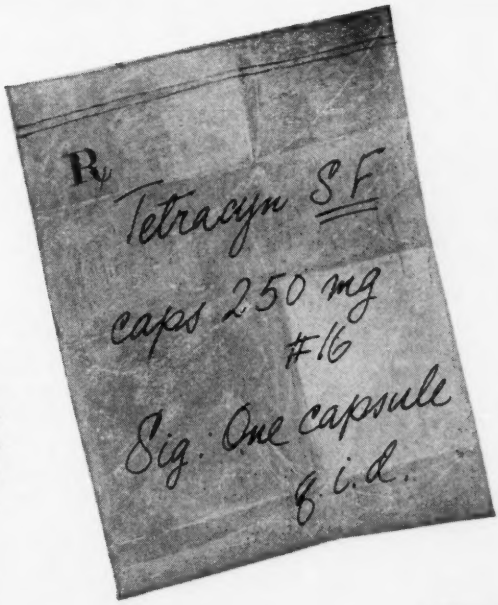
Early Pharmacopeias

Aside from a "leech pot," there are few items which pharmaceutical collectors seek as frequently as early *United States Pharmacopeias*. Sometime ago this column commented upon a copy of the 1778 *Lititz Pharmacopoeia* which was offered for sale by a New York antiquarian for $1500. Now we wish to call your attention to several other early American pharmacopeias which are offered for sale by Ida W. Schuman, 2211 Broadway, New York 24, N.Y. They are:

Item No. 433 Pharmacopoeia of the United States of America. 1820. By the Authority of the Medical Societies and Colleges. Boston, Dec., 1820. 8 vol., cont. calf. $24.

Item No. 434 Pharmacopoeia of the United States of America. Second Edition. Boston, Dec., 1828. 8 vol., cont. calf. $24.

Item No. 435 Pharmacopoeia of the United States of America, by the Authority of "The General Convention for the Formation of the American Pharmacopoeia," New York, Nov., 1830. 8 vol., cont. calf (front hinge broken). $18.



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Suspending Agents

••••••••••••••*from page 496*

was added to sterile nutrient broth containing 0.1% benzalkonium chloride with and without the addition of 1% bentonite. Substantial growth developed in all cultures to which the bentonite was added and in subcultures inoculated from these tubes after 24 hours. No growth was obtained in any cultures or subcultures of tubes in which bentonite was omitted. These results demonstrate a complete inactivation of benzalkonium chloride by bentonite. Similar inactivation of colored cationic substances such as acriflavine, quinacrine, gentian violet and methylene blue is indicated by complete or nearly complete decolorization of the supernatant when precipitated by bentonite or Veegum. The acidified supernatant shows no fluorescence when quinine is precipitated with these substances, indicating complete removal of quinine from solution.

When the colored precipitates obtained above were suspended in an artificial gastric juice no appreciable elution was noted. This indicates the possibility of inactivation of cationic drugs if taken internally along with bentonite or Veegum.

The use of anionic suspending agents such as bentonite and Veegum in conjunction with large organic cations in either topical or internal medication is highly questionable. Present recommendations for use of these substances should be limited to combinations with anionic or nonionic drugs. Most of the anionic gums produced only partial precipitation with organic cations when it occurred. Such combinations have possible utility in the production of slightly soluble derivatives of therapeutic agents.

The absence of incompatibilities with the nonionic suspending agents, methylcellulose and carob bean gum, demonstrates one of their principal advantages.

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Typical Ionic Incompatibilities of Suspending Agents

Suspending Agents[1]	Ionic Type	Acriflavine 0.1%	Gentian Violet 0.1%	Quinacrine HCl 1%	Thiamine HCl 1%	Neomycin Sulfate 1%	Pharmagel A 1%	Benzalkonium Chloride 1%	Benzalkonium Chloride 0.1%	Thenylpyramine HCl 1%	Atropine Sulfate 1%	Procaine HCl 1%	Hydrochloric Acid 1%	Aluminum Chloride 1%	Zinc Sulfate 1%	Sod. Fluorescein 1%	Amaranth 1%
Carob bean gum 1%	Nonionic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Methylcell. 4000 1%	Nonionic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sod. carboxymethylcell. M.V. 1%	Anionic	+	+	0	0	+	0	+	+	0	0	0	0	+	0	0	0
Pharmagel A, 1%	Cationic	0	0	0	0	0	−	0	0	0	0	0	0	0	0	0	0
Pharmagel B, 1%	Anionic	+	0	0	0	0	0	+	+	0	0	0	0	0	0	0	0
Acacia 1%	Anionic	0	0	0	0	0	+	+	0	0	0	0	0	0	0	0	0
Agar 1%	Anionic	+	+	+	0	Tr	+	+	Tr	0	0	0	0	0	0	0	0
Gum Ghatti 1%	Anionic	+	0	0	0	0	+	+	+	0	0	0	0	0	0	0	0
Karaya 1%	Anionic	+	+	0	0	0	+	+	+	0	0	0	0	0	0	0	0
Tragacanth 1%	Anionic	+	+	0	0	0	Tr	+	+	0	0	0	0	0	0	0	0
Sod. alginate 1%	Anionic	+	+	+	0	+	+	+	+	0	0	0	+	+	+	0	0
Pectin 1%	Anionic	0	0	0	0	Tr	+	+	+	0	0	0	0	0	0	*	0
Bentonite 1% *p*H 8.8	Anionic	+	+	+	+	+	+	+	+	+	+	+	0	+	+	0	0
Bentonite 1% *p*H 6.6	Anionic	+	+	+	+	+	+	+	+	+	+	+	0	+	+	0	0
Veegum 1% *p*H 8.3	Anionic	+	+	+	+	+	+	+	+	+	+	+	0	+	+	0	0
Veegum 1% *p*H 6.6	Anionic	+	+	+	+	+	+	+	+	+	+	+	0	+	+	0	0
Kraystay 1% (chondrus)	Anionic	+	+	+	0	+	+	+	+	+	0	+	+	+	0	0	0
Gelloid 50 1% (Ca carrageen sulf.)	Anionic	+	+	+	+	+	+	+	+	+	0	+	0	+	0	0	0

+ = Precipitation or coagulation; Tr = slight precipitation; 0 = No precipitation or coagulation; * Fluorescein precipitates as free acid due to acidity of pectin; [1] Pharmagel A & B—Pharmagel Corp., New York, N.Y.; Veegum—R. T. Vanderbilt Co., New York, N.Y.; Kraystay—Phenix Food Co., Chicago, Ill.; Gelloid 50—Jacques Wolf & Co., Passaic, N.J.

Prescription Weights

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practicing pharmacist to take some steps at periodic intervals determined by him to check the accuracy of his weighing equipment.

Maintenance Tolerances for Prescription Weights Recommended by National Bureau of Standards

Nominal Value of Weights	Tolerances Permitted OLD H44 1949	NEW Revised H44 1955	% Reduction in Tolerance
Grains			
1	0.03	[a]	..
2	0.04	[a]	..
5	0.08	0.02	75.0
10	0.12	0.04	66.7
20	0.15	0.06	60.0
Scruples			
1	0.15	0.06	60.0
2	0.25	0.1	60.0
Drams, Apoth.			
0.5	0.2	0.08	60.0
1	0.3	0.1	66.7
2	0.5	0.15	70.0
3	0.6	0.2	66.7
4	0.7	0.25	64.3
5	[b]	0.3	..
6	1.0	0.35	65.0
8	1.0	[a]	..
Ounces, Apoth.			
1	1.0	0.4	60.0
2	2.0	0.5	75.0
3	2.0	0.6	70.0
4	2.0	0.8	60.0
5	3.0	1.0	66.7
6	[b]	1.2	..
8	3.0	1.5	50.0
10	4.0	2.0	50.0
12	4.0	2.0	50.0
Milligrams			
20 or less	1.0	[a]	..
50 or less	[b]	1.0	..
50	2.0	[a]	..
100	3.0	1.5	50.0
200	4.0	2.0	50.0
500	7.0	3.0	57.1
Grams			
1	10.0	4.0	60.0
2	15.0	6.0	60.0
5	25.0	10.0	60.0
10	40.0	15.0	62.5
20	50.0	20.0	60.0
50	100.0	40.0	60.0
100	150.0	60.0	60.0
200	200.0	80.0	60.0
500	350.0	140.0	60.0

[a] No tolerance indicated in new list.
[b] No tolerance indicated in old list.

Brand Names

• • • • • • • • • • • • • • *from page 492*

prescribed product by brand name rather than by the generic name, whenever possible.

Comparison of Brand and Generic Names

Here is the actual ratio-count of prescriptions for both generic and brand name for 10 products, based on a survey of 110,000 prescriptions written in late 1953 and early 1954.

Generic Name	*Prescription Ratio*	*Brand Name*	*Prescription* Ratio*
Pentobarbital Sodium	1	Nembutal	75
Secobarbital Sodium	1	Seconal	665
d-Desoxyephedrine	1	Desoxyn	23
Chloramphenicol	1	Chloromycetin	34
Tetracycline	1	Achromycin	54
Penicillin Buffered Tablets 200,000	1	Pentids	6
Ferrous Sulfate	1	Feosol	2
Methadone	1	Dolophine	6
Aspirin	1	ASA	1

Significance to Pharmacy

The findings of the survey demonstrate conclusively that physicians, given a choice between a generic and a brand name, overwhelmingly choose the latter. A striking illustration may be found in the case of *Pentids vs. Buffered Penicillin Tablets.* For years, physicians were accustomed to write prescriptions for the generic name, but when the brand name *Pentids* appeared they chose to write for it six times more frequently.

Prescription surveys and studies are being continued and kept up to date. As a generic name is announced, it is entered in our index and watched to see how frequently it appears in prescriptions. In the meantime, may we not ask whether pharmacy has not really increased its professional prestige as well as profit during these past two decades, since prescriptions for specialties have moved forward at such a rapid pace?

* Abbott Prescription Survey—110,000 prescriptions filled in all sections of the country between September 1, 1953 and April 30, 1954.

PARTICIPATE IN
NATIONAL PHARMACY WEEK
Sponsored by the
AMERICAN PHARMACEUTICAL ASSOCIATION
OCTOBER 2–8, 1955

News *and* Notes . . .

Associations

May 1–4, 1956, marks the dates of next year's convention of the **National Association of Chain Drug Stores,** to be held at the Hollywood Beach Hotel, Hollywood, Fla.

Charles E. Lewis has been elected executive secretary of the **Association of Medical Advertising Agencies.** He is vice president of L. W. Frohlich and Company.

The 54th annual meeting of the **Medical Library Association,** held in Milwaukee, Wis., May 16–20, featured a pharmacy luncheon under the chairmanship of Elsie Bergland of the University of Illinois Library of Medical Sciences. Historical and future aspects of pharmacy education were discussed with Dr. George E. Osborne acting as discussion leader. He is associate professor of pharmacy, University of Utah College of Pharmacy. Other participants were Dean Uhl of the University of Wisconsin School of Pharmacy and Dr. George L. Webster, professor of chemistry, University of Illinois College of Pharmacy.

The **American Hospital Association** will hold its 57th annual convention in Atlantic City, N.J., September 19–22. The program will have the theme "Working Together for Better Health." A new feature of this year's convention will be the 100 round-table sessions on a variety of pertinent subjects, along with concurrent sessions on Hospital Planning, Civil Defense—Its Implications to Hospitals, and Hospital-Physician Relations. These will supplement the four general sessions on: The Hospital and the Community, Hospital and Blue Cross, National Activities to Coordinate Health Service, and Extension of Hospital Relationships.

The AMERICAN PHARMACEUTICAL ASSOCIATION will again sponsor an exhibit at the A.H.A.'s Technical Exposition.

The **New Hampshire Pharmaceutical Association's** 1955 Spring meeting was held May 31, at the Hotel Carpenter, Manchester, N.H. The Fall convention will be held September 11–13 at the Balsams Hotel, Dixville Notch, N.H.

June 12–14 marked the dates of the 74th annual convention of the **Massachusetts State Pharmaceutical Association,** held at New Ocean House, Swampscott, Mass. . . .The June 10 dinner, panel and round-table discussion of the **Parenteral Drug Association, Inc.** was held at the Hotel Sylvania, Philadelphia, Pa. . . .A panel discussion on "Reciprocity" highlighted the May 18 meeting of the *New York Academy of Pharmacy Section* of the **New York State Pharmaceutical Association,** held in New York City. Representing colleges of pharmacy was A.PH.A. Treasurer, Dr. Hugo H. Schaefer, dean, Brooklyn College of Pharmacy.

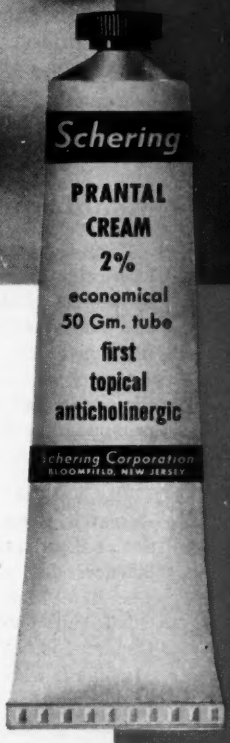
At the June meeting of the **Alumni Association of Fordham University College of Pharmacy,** 98 new members were installed. . . . Kenneth F. Valentine, president of Pitman-Moore Company, was installed as president of the **American Pharmaceutical Manufacturers' Association** at its 48th annual meeting held June 6–8 at White Sulphur Springs, West Virginia.

Kappa Psi pharmaceutical fraternity's Washington, D.C. chapter has elected the following to office: Regent, Philip J. Simon; Vice Regent, Gunther K. Kessler; Secretary, F. Richard Malzone; Treasurer, Clifford W. Haack; Parliamentarian, Louis N. Nobel; Historian, Robert F. Tomsko; and Chaplain, Edward S. Faith. . . .The Columbia University College of Pharmacy chapter of **Alpha Zeta Omega** has recently elected and installed the following officers for 1955–1956: Directorum, Robert Kirschner: Sub-Directorum, Howard Brownstein; Signare, Manuel Troncoso; Corresponding Signare, Marvin Backal; Excheque, Robert Pickholtz; and Bellarum, Samuel Abate. This chapter once again boasts 100% membership in the A.PH.A. Student branch.

The 31st Annual Meeting and 28th Scientific Sessions of the **American Heart Association** will be held at the Hotel Jung in New Orleans, October 22–26. Representatives of 56 affiliated Heart Associations and more than 350 chapters throughout the U.S., Alaska, Hawaii and Puerto Rico will attend, along with lead-

YOUR PHARMACIST WORKS FOR
BETTER COMMUNITY HEALTH
NATIONAL PHARMACY WEEK
OCTOBER 2–8, 1955

control sweating, itching, scratching, spreading of skin disorders



unusually effective in poison ivy dermatitis

- relieves even severe itching
- dries oozing lesions in 2 to 4 days

and rapid relief **in contact dermatitis, atopic eczema, dyshidrotic eczema, neurodermatitis and localized hyperhidrosis**

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ing medical scientists in the fields of research and treatment of heart and blood vessel diseases.

The 28th **International Congress of Industrial Chemistry** will be held in Madrid, Spain, October 22–31. . . .Dedication ceremonies for **The Armed Forces Institute of Pathology** were held at Walter Reed Army Medical Center, Washington, D.C., May 26 and 27. The dedicatory address was delivered by President Eisenhower.

A five-day analysis of present trends and future directions of public health is scheduled for the 83rd annual meeting of the **American Public Health Association** and 40 related organizations in the Kansas City, Mo., Municipal Auditorium, November 14–18. More than 5,000 public health workers from all parts of the free world are expected to attend.

The **25th Exposition of Chemical Industries** will be held at the Commercial Museum and Convention Hall, Philadelphia, Pa., December 5 to 9. The exposition will cover the many aspects of chemistry and chemical engineering in industry.

Manufacturers

"The Conquest of Disease" is the title of a local-origin television program script prepared by **Lederle Laboratories** for use by medical and pharmaceutical associations in public relations projects. The program utilizes visual aids such as charts, pictures, and a short film clip. A panel consisting of a moderator, a prominent local pharmacist and a prominent local physician presents the program.

The National Academy of Sciences-National Research Council has awarded four **Merck** Senior Postdoctoral Fellowships in the Natural Sciences for the academic year 1955–56. The new Merck Fellows are: Dr. Harlyn Odell Halvorson, assistant professor in the Department of Bacteriology, University of Michigan, who will study the mechanism of protein synthesis; Dr. Clifford Ralph Stocking, associate professor, Department of Botany and associate botanist, Experiment Station, University of California at Davis, whose project will deal with biochemical studies of chloroplasts with special reference to starch synthesis; Dr. Joseph Weber, professor of electrical engineering, University of Maryland, who will study the problem of renormalization and the non-perturbation approach to problems in the quantum theory of meson fields; and Dr. David Walter Weiss, staff assistant in the Pathology and Microbiology Department, Rockefeller Institute, who will devote his fellowship year to research in microbiology.

Dr. E. J. Foley, medical director of **Winthrop-Stearns Inc.,** has been appointed to the additional post of head of the medical department, succeeding the late Dr. Frank J. Stockman.

Eli Lilly and Company has invited staff delegates from the seventy-three accredited schools of pharmacy in the United States to an industrial seminar to be held August 29 through September 2 at its plants in Indianapolis. Its purpose is to acquaint deans and faculty members of colleges of pharmacy with functions of the pharmaceutical industry.

J. Mark Hiebert, executive vice president and a director, has been elected president of **Sterling Drug Inc.** James Hill, Jr., retiring president, continues as chairman of the board and chief executive officer.

Dr. L. Paul Sinotte has been named manager of pharmaceutical control for **Sharp & Dohme.**

Sydney N. Stokes has been named to the new post of assistant to the executive vice president of **van Ameringen-Haebler, Inc.,** manufacturers of perfume materials, flavors and chemicals. Stokes assumed his new duties on August 1.

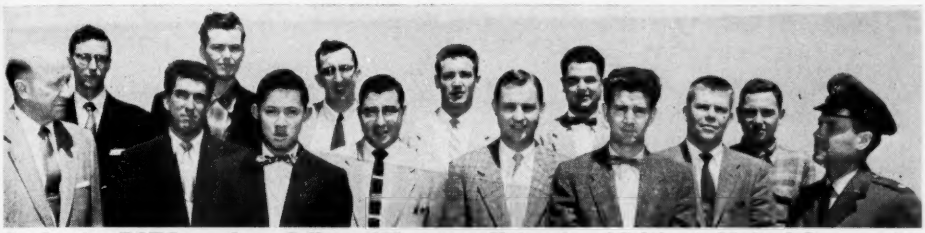
Homer C. Fritsch, executive vice president of **Parke, Davis & Company,** received an honorary Doctor of Science degree from Ohio State University, June 10.

Dr. J. B. Jewell has been appointed vice president of **Ayerst Laboratories.**

Neil J. Casey of the **Ciba Pharmaceutical Products Inc.,** has been named editor of that company's publication, *Cibascope.*

Richard B. Henninger has been appointed General Manager of **Hazleton Laboratories, Inc.**

Research grants totaling $14,000 to three institutions have been announced by **The Upjohn Company.** A grant of $5,000 in the field of virology was made to Children's Hospital of Philadelphia. A grant of $5,000 was made also to the University of Washington, Seattle, Wash., to support endocrinology research, and Northwestern University received a grant of



Graduating ROTC members, College of Pharmacy, University of California Medical Center, with Dean T. C. Daniels (l.) and Major Cooper, USAF, Military Science professor. ***(U.S. Army photo)***

$4,000 to support "Studies on the Synthesis of Condensed Ring Systems."

Colleges

One of the most consistently successful refresher courses in the nation is that sponsored by the **Massachusetts College of Pharmacy.** This year more than 300 registrants enrolled for the Tuesday and Thursday evening meetings held on May 10, 12, 17 and 19. This marks the 16th consecutive annual program sponsored by the college. Much of the program was devoted to bringing the pharmacist up to date on the pharmaceutical aspects of pediatrics and geriatrics. Among the 11 topics discussed were "Pharmaceutical Service for the Diabetic," "Opportunities for Expanding Pharmaceutical Service in the Pediatric Department" and "Acres of Diamonds in Your Prescription Department." The last evening of the program featured a series of demonstrations by Professor Mitchell J. Stoklosa on prescription compounding problems. While the Massachusetts plan may not be applicable to all areas, it is one that seems to be well suited to metropolitan areas.

At the Spring Alumni Reunion Dinner of the **Philadelphia College of Pharmacy and Science,** held May 21, two noted graduates received the annual alumni awards—E. Fullerton Cook, of the 1900 class, professor emeritus of Operative Pharmacy at the College and senior editor of "Remington's Practice of Pharmacy," and Eli Lilly, class of 1907, chairman of the board of Eli Lilly and Company of Indianapolis. Both are past honorary presidents of the A.PH.A.

Heart disease therapy and the particular application of *Rauwolfia,* reserpine, hydralazine, Ansolysen and *Veratrum* were presented to **Albany College of Pharmacy** members at a recent session. A subsequent meeting dealt with hormones and cancer.

Salk Vaccine . . . . . *from page 483*

arranges for the repayment of Federal funds which have been diverted or improperly expended (or for repayment of the cost of the vaccine which has been diverted).

Exercise of Functions

SEC. 9. The functions granted to the Surgeon General under this Act shall be exercised under the supervision and direction of the Secretary of Health, Education, and Welfare.

Definitions

SEC. 10. For purposes of this Act—

(a) The term "Surgeon General" means the Surgeon General of the Public Health Service.

(b) (1) The term "eligible person" means any individual who has not attained the age of twenty years and any expectant mother.

(2) The number of eligible persons shall be determined by the Surgeon General, as of June 30, 1955, on the basis of estimates developed after consideration of the latest information furnished by the Department of Commerce or any other department or agency of the United States.

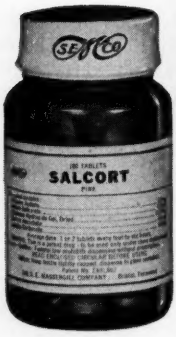
(3) The number of unvaccinated eligible persons means the number of eligible persons, reduced by (A) the number who were vaccinated against poliomyelitis during 1954, and (B) two-thirds of the number who the Surgeon General estimates will receive vaccination under the current program of the National Foundation for Infantile Paralysis.

(c) The term "State" includes Alaska, Hawaii, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Canal Zone, and the District of Columbia.

(d) The cost of the poliomyelitis vaccine shall be determined by the Surgeon General on the basis of information available to him; and such cost may be determined from time to time or as of a specified date and may be determined to be a single figure for all States or varied in accordance with actual cost.

(e) The term "approved nonprofit organization" means, in the case of any State, a nonprofit organization approved by the State agency responsible for administration or supervision of administration of the State plan.

Approved August 12, 1955.



this new antiarthritic

moves fast off the shelf

More and more Salcort is being prescribed each day, because this cortisone-salicylate combination has proved unusually effective in the treatment of arthritic conditions. Virtually without side effects, Salcort causes no withdrawal problems.

Be certain you're well-stocked with Salcort. It moves fast—and returns you a generous profit. Heavy, continuing, nation-wide promotion keeps the Rxs coming in.

Supplied in bottles of 100 pink monogrammed tablets

Each Salcort Tablet contains:

Cortisone acetate	2.5 mg.
Sodium salicylate	0.3 Gm.
Aluminum hydroxide gel, dried	0.12 Gm.
Calcium ascorbate (equivalent to 50 mg. ascorbic acid)	60 mg.
Calcium carbonate	60 mg

Effective in:

Rheumatic fever
Rheumatoid arthritis
Rheumatoid spondylitis
Bursitis
Still's disease
Neuromuscular affections

THE S. E. MASSENGILL COMPANY
Bristol, Tenn. New York Kansas City San Francisco

Prescription Products

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this department, for which there is no charge, send descriptive literature to the Practical Pharmacy Edition, Journal of the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D.C.

Antimumps Serum (Human), Concentrated

Description: The gamma globulin fraction of blood from healthy human donors who have been hyperimmunized with mumps virus vaccine. Each 2.5 cc. is equivalent in antibody content to at least 25 cc. of original hyperimmune serum, as determined by complement fixation tests.

Indications: For passive prophylaxis of mumps in children and adults. Use in treatment less well established, but there is evidence that it reduces incidence of orchitis markedly if administered early in adequate amount.

Administration: Intramuscularly. (Not to be given intravenously.) *For prophylaxis*—one 2.5-cc. vial for children under 12 years old; larger doses for older children or adults. If use of the serum is delayed more than a week after exposure, larger initial dose should be used. If exposure continues, dosage should be repeated at 1- to 2-week intervals. *For treatment*—Dose must be larger than for prophylaxis, should be administered as early in the disease as possible, and repeated perhaps as often as daily.

Form Supplied: 2.5-cc. vials.

Source: Hyland Laboratories, Los Angeles, Calif.

Antipertussis Serum (Human), Concentrated

Description: The gamma globulin fraction of blood from healthy human donors who have been hyperimmunized with pertussis vaccine (Phase I). Each 2.5 cc. is equivalent in antibody content to at least 25 cc. of original hyperimmune serum, as determined by agglutination tests.

Indications: For passive prophylaxis and treatment of whooping cough.

Administration: Intramuscularly. (Not to be given intravenously.) *For prophylaxis*—One 2.5-cc. dose as soon after exposure as possible, repeated at 1- to 2-week intervals if exposure continues. If use of the serum is delayed more than a week after exposure, larger initial dose should be used. *For treatment*—One 2.5-cc. dose when symptoms appear, with additional doses at 1- to 2-day intervals until recovery has begun. For critically ill children, initial dose might be doubled. Reduction of paroxysms is most marked when administered early in the course of the disease.

Form Supplied: 2.5-cc. vials.

Source: Hyland Laboratories, Los Angeles, Calif.

Bonadoxin Tablets

Description: Each pink and blue, scored tablet contains meclizine HCl, 25 mg., and pyridoxine HCl, 50 mg.

Indications: For control of nausea and vomiting in pregnancy.

Administration: One tablet at bedtime and in severe cases one on arising.

Form Supplied: Bottles of 25.

Source: J. B. Roerig & Company, Chicago, Ill.

Chlorostrep Kapseals

Description: Capsules containing in each: chloramphenicol, 125 mg.; and dihydrostreptomycin (as sulfate), 125 mg.

Indications: For treatment of susceptible enteritic infections, mixed infections encountered

NEW *Prescription Products*

in bowel surgery, and anorectal tuberculosis. Also used pre- and post-operatively in intestinal surgery.

Administration: One to 4 capsules every 6 hours. Preoperatively, dosage should be started three or four days before surgery and, when fluids are resumed, for five to six days after. For tuberculosis, daily total dosage should be increased, or the usual dosage given over a longer period.

Form Supplied: Bottles of 12 Kapseals.

Source: Parke, Davis & Company, Detroit, Mich.

Deltra Tablets

Description: Scored tablets containing in each, 5 mg. of prednisone (metacortandracin, Δ^1-dehydrocortisone).

Indications: For palliative treatment where corticosteroid medication is desirable. Anti-inflammatory agent in rheumatoid arthritis.

Administration: Initial—orally, in 3 or 4 divided doses 20 to 30 mg. a day for several days or until desired degree of remission is obtained; gradually reduced every 4 to 5 days by steps of 2.5 to 5 mg. to maintenance dosage of 5 to 20 mg.

Form Supplied: Bottles of 30 and 100 tablets.

Source: Sharp & Dohme, Philadelphia, Pa.

Dibuline Sulfate Sterile Solution

Description: A solution containing (25 mg.) of dibutoline sulfate in each cc.

Indications: Prompt (1–10 minutes) parasympatholytic and spasmolytic antispasmodic for biliary spasm, urinary bladder spasm, spastic colon, functional pylorospasm, gastric and duodenal ulcer and acute gastroenteritis.

Administration: Subcutaneous or intramuscular—25 mg., repeated if necessary after 20–30 minutes, and as indicated symptomatically.

Form Supplied: 5-cc. rubber-capped vials.

Source: Sharp & Dohme, Philadelphia, Pa.

Dura-Tab S.M. Homatal

Description: Each sustained medication tablet contains homatropine methylbromide, 1/4 gr., and phenobarbital, 1 gr.

Indications: A parasympatholytic and anticholinergic combination for relief of hyperchlorhydria and spasm of the gastrointestinal tract.

Administration: One tablet every 10 or 12 hours, or as directed.

Form Supplied: Bottles of 30, 100 and 250 tablets.

Source: Wynn Pharmacal Corporation, Philadelphia, Pa.

Falgos Tablets

Description: Tablets containing in each: aspirin, 3 gr.; acetophenetidin, 3 gr.; caffeine, 1/3 gr.; with aluminum and magnesium hydroxides.

Indications: For pain relief with analgesic antacid mixture.

Administration: One or two tablets with water, repeated every three hours if necessary.

Form Supplied: Bottles of 15 and 40.

Source: American Ferment Co., Inc., New York, N.Y.

Histalme Duracaps Capsules

Description: Each time-disintegration capsule contains: pyrilamine maleate, 75 mg.; hyoscyamine HBr, 0.12 mg.; hyoscine HBr, 0.024 mg.; and *d*-amphetamine sulfate, 2.3 mg.

Indications: Hayfever, motion sickness and allergic manifestations.

Administration: Three to six capsules during a 24-hour period.

Form Supplied: Bottles of 30 and 100.

Source: Meyer and Company, Inc., Detroit, Mich.

Meratran with Reserpine Tablets

Description: Each initialed tablet contains: pipradrol HCl, 1 mg.; and reserpine, 0.25 mg.

Indications: For the treatment of emotional problems characterized by the mixed clinical picture of depression with tension.

Administration: One tablet three times daily. Individual response will determine optimal dosage. Because of the latent period before reserpine exerts its activity, medication should be continued for about one week before increasing dosage above three tablets daily.

Form Supplied: Bottles of 100 tablets.

Source: The Wm. S. Merrell Company, Cincinnati, Ohio.

Meticortelone Tablets

Description: Each scored, buff colored tablet contains 5 mg. of prednisolone.

Indications: For inflammatory and rheumatic conditions that respond to prednisone, cortisone or hydrocortisone.

Administration: Initially 20–30 mg. daily, gradually reduced by 2.5–5 mg. to maintenance dosage of 5–20 mg. The daily dosage should be divided into 4 parts given after meals and at bedtime. Patients may be transferred from hydrocortisone or cortisone to prednisolone.

Form Supplied: Bottles of 30 and 100 tablets.

Source: Schering Corporation, Bloomfield, N.J.

Miltown Tablets

Description: Each tablet contains 400 mg. of 2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate.

Indications: In anxiety and tension states, sleeplessness due to worry, and muscle spasm.

Administration: One tablet three times a day, usually after meals, and one at bedtime.

Form Supplied: Bottles of 50.

Source: Wallace Laboratories, New Brunswick, N.J.

Neobon Capsules

Description: Dark red, soft capsules containing lysine, methyl testosterone, ethinyl estradiol, liver-stomach substance, pancreatic substance, glutamic acid, rutin, ascorbic acid, folic acid, vitamin B_{12}, vitamins A, D, E, calcium pantothenate, vitamins B_1, B_2, B_6, niacinamide, iron, and eight trace elements.

Indications: As an agent to retard the aging process.

Administration: Orally, one capsule three times daily, with meals.

Form Supplied: Bottles of 60 capsules, On prescription only.

Source: J. B. Roerig & Co., Chicago, Ill.

Neo-Cortef Lotion

Description: A lotion containing: hydrocortisone, 1%; neomycin, 5 mg.; methylparaben, 2 mg.; and butyl-*p*-hydroxybenzoate, 3 mg., in a water-soluble base.

Indications: Treatment of various forms of allergic dermatitis and other inflammatory skin diseases.

Administration: Topically. A small amount is gently rubbed into involved areas one to three times daily or as directed by physician.

Form Supplied: 15-cc. and 30-cc. plastic spray bottles.

Source: The Upjohn Company, Kalamazoo, Mich.

Neo Semhyten Capsules

Description: Each capsule contains reserpine, 0.1 mg.; mannitol hexanitrate, 30 mg.; theophylline, 0.1 Gm.; rutin, 10 mg.; and ascorbic acid, 15 mg.

Indications: For treatment of essential hypertension and as a prophylactic measure in combating severe and malignant hypertension.

Administration: One capsule four times daily, after meals and at bedtime.

Form Supplied: Bottles of 100, 500, and 1,000.

Source: The S. E. Massengill Company, Bristol, Tenn.

Normal Serum Albumin (Human), 5% Solution in Saline

Description: A 5% solution of the albumin fraction from pooled human plasma, in saline. Sterilized by filtration. Each 250 cc. is the approximate colloid osmotic (water-binding) equivalent of an equal volume of citrated normal human plasma, or of 50 cc. of concentrated (25%) solution of normal serum albumin.

Indications: In treatment of frank or incipient shock due to trauma, burns, hemorrhage, operation or infection.

Administration: Intravenously only. Support with whole blood as needed. May be administered as rapidly as desired, except in cases where rapid increase in blood volume might prove harmful.

Form Supplied: 250-cc. bottle, containing 12.5 Gm. of normal serum albumin in saline, with administration set and suspension bail.

Source: Hyland Laboratories, Los Angeles, Calif.

Pantho-F Cream

Description: A stainless, white, stable, water-miscible cream containing 1% hydrocortisone and 2% pantothenylol.

Indications: For treatment of dermatitis, neurodermatitis, pruritus ani et vulvae, lichen chronicus simplex, and in skin conditions requiring anti-inflammatory, antipruritic, healing therapy.

Administration: Clean affected area, then gently rub in a small amount of Pantho-F cream 2 or 3 times daily or as required. Frequency of use may be reduced as improvement is noted. When inflammation subsides treatment may be continued with Panthoderm cream.

Form Supplied: Tubes of 5 and 20 Gm.

Source: U.S. Vitamin Corporation, New York, N.Y.

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AMERICAN PHARMACEUTICAL ASSOCIATION
OCTOBER 2–8, 1955

NEW *Prescription Products*

Polycycline Ointment

Description: A petrolatum-lanolin based topical ointment containing 30 mg. of tetracycline HCl and 20 mg. of Xylocaine (lidocaine HCl) in each Gm.

Indications: For treatment of pus-forming skin infections and prevention of infection resulting from abrasions or in open surgical wounds.

Administration: Topically.

Form Supplied: 1-oz. or $^1/_2$-oz. tubes.

Source: Bristol Laboratories Inc., Syracuse, N.Y.

Polycycline Ophthalmic Ointment

Description: An ointment containing tetracycline HCl 1% and Xylocaine (lidocaine HCl) 2% in a mineral oil base.

Indications: For superficial infections of the eye caused by organisms sensitive to tetracycline.

Administration: Locally.

Form Supplied: $^1/_8$-oz. tubes.

Source: Bristol Laboratories Inc., Syracuse, N.Y.

Theelin R-P Solution

Description: A solution containing, in each cc., 2 mg. of theelin and 1 mg. of potassium theelin sulfate in physiologic sodium chloride solution.

Indications: For alleviating signs and symptoms of the menopause and other conditions responsive to estrogens. Provides rapid initial relief and prolonged effect.

Administration: As directed by physician.

Form Supplied: 10-cc. Steri-Vials.

Source: Parke, Davis & Company, Detroit, Mich.

Wigraine Tablets

Description: Each tablet contains: ergotamine tartrate, 1 mg.; caffeine, 100 mg.; belladonna alkaloids, 0.1 mg. (hyoscyamine 87.5% and atropine 12.5% as sulfates); acetophenetidin, 130 mg.

Indications: For treatment of migraine headaches.

Administration: Two tablets at the first sign of attack, then one tablet every 20–30 minutes. No more than six tablets should be taken for one migraine attack and no more than twelve tablets during one week.

Form Supplied: Boxes of 20 foil-stripped tablets.

Source: Organon Inc., Orange, N.J.

Other New Products

(Chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy)

Chlor-Trimeton Repetabs, 12 mg.

Schering Corporation has marketed Repetabs containing 12 mg. of chlorprophenpyridamine maleate in each tablet in addition to their 8-mg. Repetabs. The 12-mg. tablet provides patients with more resistant allergies with 8 to 12 hours of antihistaminic relief. Available as brand-marked coated tablets in bottles of 100 and 1,000.

Hollandex Silicone Ointment with Vitamins A and D

A greaseless water-repellent ointment containing cod liver oil is recommended for diaper rash and minor skin irritations by *Holland Rantos Company, Inc.* It is available in 1-oz. and $2^3/_4$-oz. tubes and 1-lb. jars.

Household Glove Patch Test Kit

A kit containing discs of the materials used in household gloves and linings for making dermatologic patch tests for reactions to these materials is marketed by the *Pioneer Rubber Company.*

Isolyte—Intravenous Solution

A balanced electrolyte solution marketed by *Don Baxter, Inc.*, contains in each 100 cc.: sodium acetate, 0.64 Gm.; sodium chloride, 0.50 Gm.; potassium chloride 0.075 Gm.; sodium citrate, 0.079 Gm.; calcium chloride, 0.037 Gm.; and magnesium chloride hexahydrate, 0.031 Gm. This solution is available in 250-cc. and 1,000-cc. (Vacoliter) containers. The solution with 5% dextrose is also available in 1,000-cc. Vacoliter containers.

Otamylon Ear Drops

Ear drops containing Sulfamylon (mafenide; 4-aminoethylbenzenesulfonamide HCl), 5%, and benzocaine, 5%, in propylene glycol, with chlorobutanol, 0.4%, as preservative, for topical use in acute and chronic otitis externa, furunculosis and otitis media, are marketed by *Winthrop-Stearns, Inc.*, in 15-cc. bottles with dropper.

For the first few days of treatment cleanse the external ear canal, dry, then apply Otamylon three or four times daily by adding 2–3 drops and plugging with cotton or by inserting a gauze wick moistened with the liquid.

Polycycline Aqueous 125

A cherry flavored suspension containing calcium tetracycline equivalent to 125 mg. of tetracycline HCl in each 5 cc. is now available from *Bristol Laboratories* in 2-oz. bottles. The suspension is stable for 18 months at room temperature. The 250-mg. per 5 cc. suspension is also available.

Polycycline Aqueous Pediatric Drops

A cherry flavored aqueous suspension containing 100 mg. of tetracycline HCl in each cc. is now marketed by *Bristol Laboratories* in 10-cc. bottles with calibrated dropper for 25-mg. and 50-mg. doses. The suspension is stable for 18 months at room temperature.

Reserpine Alkaloid Tablets

West-ward, Inc. has made available tablets containing 1 mg. of reserpine per tablet in addition to the 0.25-mg. tablet. Both are available in bottles of 100 and 1,000 tablets.

Steraject Cartridge—Improved

A new improved Steraject disposable cartridge with sterile needle attached has been introduced by *Pfizer Laboratories*. The new cartridge fits the regular Steraject syringe and is available with the following antibiotic dosage forms: procaine penicillin aqueous suspension in 300,000 units, 600,000 units and 1,000,000 units strengths, Permapen aqueous suspension, Permapen fortified, Combiotic aqueous suspension, streptomycin sulfate solution (1 Gm.) and dihydrostreptomycin sulfate solution (1 Gm.). The new cartridges are packaged with needles attached in strips of cellophane, five units in a strip, two strips to a package.

Sulfastrep Tablets (Vet.)

Sulfastrep tablets, a new veterinary product for the control of calf scours and intestinal infections of bacterial origin, has been released by *Sharp & Dohme*. Each slotted bolet-shaped Sulfastrep tablet contains: streptomycin, 125 mg.; Sulfathalidine (phthalylsulfathiazole), 2.0 Gm.; sulfamethazine, 0.5 Gm.; and kaolin, 1.0 Gm. These tablets may be used for intestinal bacterial infections of animals other than calves, such as lamb dysentery. Sulfastrep tablets are available in bottles of 5 and 100.

Sustagen

A concentrated powder containing large amounts of protein, carbohydrate, fat, vitamins, and minerals, designed for either oral use or for tube feeding, Sustagen is produced by *Mead Johnson & Company*.

Tedral Suspension

The combination of theophylline, 2 gr.; ephedrine, $^3/_8$ gr.; and phenobarbital, $^1/_8$ gr. in each teaspoonful of an anise-mint flavored suspension is now marketed by *Warner-Chilcott Laboratories*. Recommended for the relief of asthma symptoms, Tedral suspension is available in 4-oz. bottles.

Tyrothricin in Ointments

McKesson & Robbins, Inc. have marketed ointments of boric acid, zinc oxide, ammoniated mercury, and ichthammol, with each ointment containing the antibiotic tyrothricin as an additional ingredient. The products are available for over the-counter sale, and are packaged in 20-Gm. tubes.

Tyzine Pediatric Nasal Drops

A solution containing 0.05% of tetrahydrozoline HCl to relieve nasal congestion in infants and children up to 6 years of age has been marketed by *Pfizer Laboratories*. The recommended dose is 1–2 drops in each nostril every 4–6 hours. The solution is available in $^1/_2$-oz. bottles with calibrated dropper.

Urosulfin Tablets

Red, sugar-coated tablets, each containing sulfamethylthiadiazole, 250 mg., and phenylazodiaminopyridine HCl, 50 mg., have been marketed by *Nepera Chemical Co., Inc.* Recommended for urinary tract infections, Urosulfin tablets are available in bottles of 50 and 500.

Vergo Cream

A cream containing calcium pantothenate 8% and ascorbic acid 2% is marketed by *Daywell Laboratories* for the treatment of foot (plantar) warts. Applied locally on bandage, the cream is purported to destroy only the wart tissue. Available in $^1/_2$-oz. and $^1/_6$-oz. tubes.

YOUR PHARMACIST WORKS FOR
BETTER COMMUNITY HEALTH
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